Weinschel Associates
Broadband RF/Microwave Solutions

Introduction

Weinschel Associates has at its foundation a 50 year legacy as a supplier of high performance, high quality Broadband Passive Components to the RF and Microwave communities. WA builds on this foundation through the application of modern process and product technologies to continuously drive our product, price, and service performance.

At the core of our business are our proven Engineering and Manufacturing techniques. Refined methods of resistor manufacture produce better yields at higher accuracies with improved typical performance. This applies both to attenuation and VSWR versus frequency as well as low power and temperature coefficients. The process of deposition and ruggedness of our resistive films provide bilateral match for all units and bilateral high power input in many of our models.

Wrapped around this core is an aggressive and customer-focused business model. WA understands modern consumers of RF and Microwave Passive Components are less likely to be Microwave experts than in decades past and we are dedicated to helping our customers identify and acquire the optimum products.

Our goal is to serve you, the customer, with an ever increasing usefulness of product line. This catalogue provides a snapshot of our product offerings. We hope you will find what you require.

Catalog Table of Contents

Please keep in mind new products are always in development and we would be delighted to discuss your requirements to help you find the best product for your application.

Mission Statement

Weinschel Associates designs and manufactures high-quality RF and Microwave products for commercial and military markets both domestic and international. Core technologies originated by founder Bruno Weinschel are leveraged using modern design, production, delivery, and service techniques to provide the best product at the best price to our customers. Our path to success hinges upon a continuous focus on product quality, price performance, and service.

A Tradition of Quality
A Commitment to Service

Quality Policy

The Quality Policy of Weinschel Associates is as follows:

- To meet or exceed all requirements agreed to with our customers.
- To strive for continuous improvement in Product Quality, Price Performance, and Customer Service.

Quality Control

Our products are designed and tested to meet MIL-I-45208, MIL-Q-9858, MIL-C-45662 as they apply. Connector interface dimensions comply with MIL-PRF-39012, MIL-STD-348, and IEEE-STD-287. Attenuators are designed to meet MIL-DTL-3933. Terminations are designed to comply with MIL-DTL-39030.

RoHS Compliance

The RoHS directive (EU Directive 2002/95/EC) became valid on 1 July 2006 in the member states of the European Union. Its aim is to reduce a total of six substances from Electrical and Electronic Equipment (EEE), thereby contributing to the protection of human health and the environment.
Although RoHS is a European Union (EU) Directive, manufacturers of EEE outside Europe must also abide by this legislation if the equipment they produce is ultimately imported into an EU member state.
The RoHS directive restricts the use of certain hazardous substances commonly used in the manufacturing of electronic equipment and requires producers of electronic equipment to reduce the concentration of these hazardous materials, by July, 2006, to proscribed levels by weight.
Weinschel Associates aims to minimize environmental impacts due to our products and processes by systematically considering environmental issues during product design.
To the best of our knowledge, the products presented in this catalogue comply with the hazardous substance restrictions imposed by the RoHS directive and are suitable for use in RoHS-compliant systems and assemblies.

How to Order

When placing an order, please provide the model number, attenuation in decibels (dB) for an attenuator, and the desired connector configuration.

* Connector Code

Examples					
Attenuator:	WA48	-	30	-	0403
	Model		dB		*
Termination:	WA1424	-	05		
	Model		*		

Connector Codes

Connector Code: Each digit represents a connector type per the following table:

Code	Connector Type	Gender
01	SMA Jack	F
02	SMA Plug	M
03	N-Type Jack	F
04	N-Type Plug	M
05	TNC Jack	F
06	TNC Plug	M
07	DIN 7/16 Jack	F
08	DIN 7/16 Plug	M
09	7 mm	N/A
10		
11	3.5 mm	F
12	3.5 mm	M
13	2.92 mm	F
14	2.92 mm	M
15	2.4 mm	F
16	2.4 mm	M
17	1.85 mm	F
18	1.85 mm	M
19	BNC	F
20	BNC	M

Connector codes may vary depending on model type as listed on the associated specification sheet. In the case of Uni-directional attenuators, the first digit of the connector code identifies the input connector (N-type Plug (m) in the example) and the second digit identifies the output connector (N-Type Jack (f) in the example).

Connector types not listed on the specification sheets may be available. We will make every effort to accommodate your request.

Power Ratings

Unless otherwise specified, all of our products will operate at their full power rating without the need for forced air cooling.

All of our products are dry and achieve their rated power handling without oils or other coolants.

Warranty

Weinschel Associates warrants each product it manufactures to be free from defects in material and workmanship. Defective product will be repaired or replaced at the discretion of WA at no charge to the customer for a period of two years after shipment to the original purchaser.

The above warranty is Weinschel Associates sole warranty and the extent of its liabilities and obligations with respect to its products unless otherwise explicitly agreed to in writing. WA makes no other warranty of any kind, express or implied, and disclaims any warranty of merchantability or fitness for a particular purpose. In no event shall WA be liable for any incidental, consequential, or special loss or damages, or for any sum greater than the purchase price of the product.

Weinschel Associates reserves the right to make changes in the design of its products at any time without incurring any obligation to make those changes on products it has previously sold.

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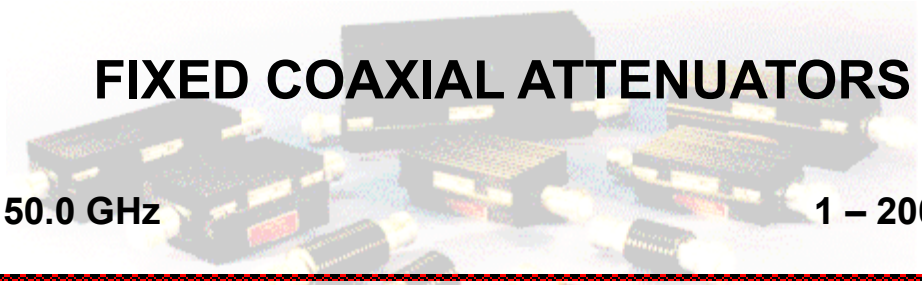
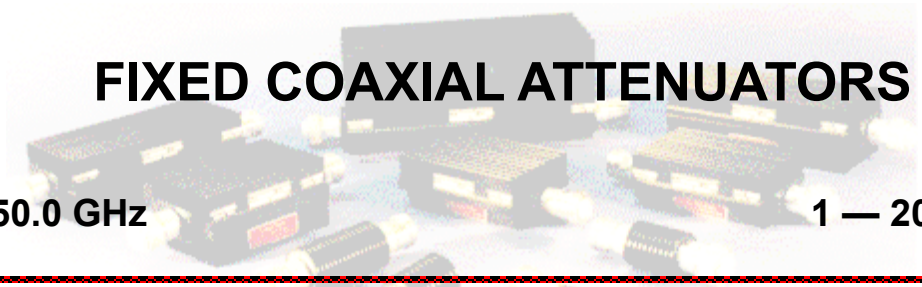
FIXED COAXIAL ATTENUATORS



DC – 50.0 GHz **1 – 2000 WATTS**

Low Power Fixed Attenuators: 1 Watt to 10 Watts						
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Power (kW)**	**Standard* Attenuation Values (dB)**	**Connectors and Mounting Notes**	**Page No.**
WA6	1	50	0.25	1 to 30	2.4 mm	13
WA50	2	3	1	1 to 50	N	45
WA1W/6	2	6	1	1 to 60	N	6
WA3/6	2	6	0.5	1 to 60	SMA	7
WA3C/6	2	6	0.25	1 to 30	SMA	8
WA3CH/6	2	6	0.25	1 to 30	SMA	9
WA3H/6	2	6	0.5	1 to 60	SMA	10
WA3M/6	2	6	0.5	1 to 60	SMA	11
WA3T/6	2	6	0.5	1 to 60	SMA	12
WA18	2	6	1	1 to 30	BNC	17
WA1W	2	12.4	1	1 to 60	N	6
WA3	2	12.4	0.5	1 to 60	SMA	7
WA3C	2	12.4	0.25	1 to 30	SMA	8
WA3CH	2	12.4	0.25	1 to 30	SMA	9
WA3H	2	12.4	0.5	1 to 60	SMA	10
WA3M	2	12.4	0.5	1 to 60	SMA	11
WA3T	2	12.4	0.5	1 to 60	SMA	12
WA2W	2	18	1	1 to 60	N	6
WA32	2	18	0.5	1 to 60	SMA	26
WA4	2	18	0.5	1 to 60	SMA	7
WA4C	2	18	0.25	1 to 30	SMA	8
WA4CH	2	18	0.25	1 to 30	SMA	9
WA4H	2	18	0.5	1 to 60	SMA	10
WA4M	2	18	0.5	1 to 60	SMA	11
WA4T	2	18	0.5	1 to 60	SMA	12
WA9	2	26.5	0.5	1 to 60	SMA	16
WA56	2	32	0.2	1 to 30	3.5mm	50
WA54	2	40	0.2	1 to 30	2.92 mm	48
WA54CH	2	40	0.2	1 to 30	2.92 mm	48
WA6A	2	50	0.25	1 to 30	2.4 mm	13
WA1/6	5	6	1	1 to 60	N	5
WA7/6	5	6	1	1 to 60	SMA	14
WA19	5	6	1	1 to 30	BNC	18
WA55/6	5	6	1	1 to 30	TNC	49
WA1	5	12.4	1	1 to 60	N	5
WA7/12	5	12.4	1	1 to 60	SMA	14
WA2	5	18	1	1 to 60	N	5
WA44	5	18	1	1 to 60	N	39

FIXED COAXIAL ATTENUATORS



DC – 50.0 GHz **1 — 2000 WATTS**

Low Power Fixed Attenuators: 1 Watt to 10 Watts - Continued						
Model Number	Average Power (W)	Frequency Range DC - (GHz)	Peak Power (kW)	Standard* Attenuation Values (dB)	Connectors and Mounting Notes	Page No.
WA7	5	18	1	1 to 60	SMA	14
WA55	5	18	1	1 to 30	TNC	49
WA77	5	32	0.2	1 to 30	3.5 mm	67
WA75	5	40	0.2	1 to 30	2.92 mm	64
WA41/6	10	6	1	1 to 60	SMA	36
WA41T/6	10	6	1	1 to 60	TNC	37
WA8/6	10	6	1	1 to 60	N	15
WA20	10	6	1	1 to 30	BNC	19
WA37	10	8.5	1	1 to 60	N	32
WA41/12	10	12.4	1	1 to 60	SMA	36
WA41T/12	10	12.4	1	1 to 60	TNC	37
WA8/12	10	12.4	1	1 to 60	N	15
WA41	10	18	1	1 to 60	SMA	36
WA41T	10	18	1	1 to 60	TNC	37
WA8	10	18	1	1 to 60	N	15
WA76	10	40	0.2	6 to 30	2.92 mm	65
WA76B	10	40	0.2	3 to 30	2.92 mm, Flatpack	66

Medium Power Fixed Attenuators: 20 Watts to 100 Watts						
Model Number	Average Power (W)	Frequency Range DC - (GHz)	Peak Power (kW)	Standard* Attenuation Values (dB)	Connectors and Mounting Notes	Page No.
WA33L	20	4	5	1 to 30	N, SMA, TNC, 7/16 DIN	29
WA34L	20	8.5	5	1 to 30, 40	N, SMA, TNC, 7/16 DIN	29
WA89	20	40	0.20	10 to 30	2.92 mm	71
WA21	25	4	5	1 to 40	N, SMA, TNC, Low-Profile, Mountable	20
WA34	25	4	5	1 to 40	N, SMA, 7/16 DIN	27
WA34B	25	4	5	1 to 40	N, SMA, TNC, Square Body Mount	28
WA22	25	8.5	5	1 to 30	N, SMA, TNC, Low-Profile, Mountable	20
WA33	25	8.5	5	1 to 30	N, SMA, 7/16 DIN	27
WA33B	25	8.5	5	1 to 30	N, SMA, TNC, Square Body Mount	28
WA46/12	25	12.4	1	3 to 40	N, SMA, TNC	41
WA46	25	18	1	3 to 40	N, SMA, TNC	41
WA74	25	28	0.50	3 to 30	3.5 mm	63

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FIXED COAXIAL ATTENUATORS

DC – 50.0 GHz **1 — 2000 WATTS**

Medium Power Fixed Attenuators: 20 Watts to 100 Watts - Continued						
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Power (kW)**	**Standard* Attenuation Values (dB)**	**Connectors and Mounting Notes**	**Page No.**
WA23	50	4	5	1 to 40	N, SMA, TNC, 7/16 DIN	21
WA23B	50	4	5	3 to 40	N, SMA, TNC Square Body Mount	22
WA71	50	4	5	1 to 40	N, SMA, TNC Low-Profile, Mountable	61
WA24	50	8.5	5	3 to 40	N, SMA, TNC, 7/16 DIN	21
WA24B	50	8.5	5	3 to 40	N, SMA, TNC, Square Body Mount	22
WA72	50	8.5	5	1 to 40	N, SMA, TNC, Low-Profile, Mountable	61
WA47/12	50	12.4	1	6 to 40	N, SMA, TNC	42
WA90/12	50	12.4	1	3 to 40, 50, 60	N, SMA, TNC	72
WA47	50	18	1	6 to 40	N, SMA, TNC	42
WA90	50	18	1	3 to 40	N, SMA, TNC	72
WA90B	50	18	1	3 to 40	N, SMA, TNC	73
WA73	50	26	0.5	6 to 40	3.5 mm	62
WA88	50	40	0.2	20, 30, 40	2.92 mm	70
WA29/4	75	4	5	3 to 49	N, SMA, TNC, 7/16 DIN	24
WA29	75	8.5	5	3 to 40	N, SMA, TNC, 7/16 DIN	24
WA59	100	3.0	10	3 to 40	N, SMA, TNC, Low-Profile, Mountable	53
WA26	100	4	5	3 to 40	N, SMA, TNC, 7/16 DIN	23
WA30	100	4	5	3 to 30	N, SMA, TNC, 7/16 DIN	25
WA68	100	6	5	1 to 30	N, SMA, 7/16 DIN	59
WA27	100	8.5	5	3 to 40	N, SMA, TNC, 7/16 DIN	23
WA31	100	8.5	5	3 to 30	N, SMA, TNC, 7/16 DIN	25
WA48/12	100	12.4	1	10 to 30	N, SMA, TNC	43
WA91/12	100	12.4	1	3 to 40	N, SMA, TNC	74
WA48	100	18	1	10 to 40	N, SMA, TNC	43
WA91	100	18	1	3 to 40	N, SMA, TNC	74
WA93	100	18	1	10 to 30	N, SMA, TNC	76

* Other attenuation values and connector configurations are available

Custom solutions at "off-the-shelf" prices

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FIXED COAXIAL ATTENUATORS

DC – 50.0 GHz **1 — 2000 WATTS**

High Power Fixed Attenuators: 150 Watts to 2000 Watts						
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Power (kW)**	**Standard* Attenuation Values (dB)**	**Connectors and Mounting Notes**	**Page No.**
WA40	150	3	10	3 to 40	N, SMA, TNC, 7/16 DIN	35
WA42	150	3	10	3 to 40	N, SMA, TNC, 7/16 DIN Low-Profile, Mountable	38
WA65	150	3	10	3 to 30	N, SMA, 7/16 DIN	56
WA39	150	4	5	3 to 40	N, SMA, TNC, 7/16 DIN	34
WA61	150	4	5	3 to 40	N, 7/16 DIN Low-Profile, Mountable	55
WA57	150	5	10	3 to 40	N, SMA, TNC, 7/16 DIN	51
WA49	150	8.5	5	3 to 40	N, SMA, TNC, 7/16 DIN	44
WA62	150	8.5	5	3 to 40	N, 7/16 DIN Low-Profile, Mountable	55
WA66/12	150	12.4	1	10 to 40	N, SMA	57
WA92/12	150	12.4	1	10 to 40	N, SMA, TNC	75
WA66	150	18	1	10 to 40	N, SMA	57
WA92	150	18	1	10 to 40	N, SMA, TNC	75
WA95/12	200	12.4	1	10 to 40	N-type	77
WA95	200	18	1	10 to 40	N-type	77
WA45	250	2.5	10	10 to 40	N, 7/16 DIN	40
WA45/3	250	3	10	10 to 40	N, 7/16 DIN	40
WA58	250	5	10	3 to 40	N, 7/16 DIN	52
WA35	250	8.5	5	10 to 40	N, 7/16 DIN	30
WA96	250	18	1	10 to 40	N-type	78
WA38	300	5	10	10 to 40	N, 7/16 DIN	33
WA36	300	8.5	5	10 to 40	N, 7/16 DIN	31
WA67	350	12	5	10 to 40	N-type	58
WA53	500	3	10	3 to 40	N, 7/16 DIN	47
WA60	500	5	5	10 to 40	N, 7/16 DIN	54
WA51	500	8.5	5	10 to 40	N, 7/16 DIN	46
WA81	500	10	5	10 to 40	N, 7/16 DIN	69
WA70	1000	3	10	20, 30, 40	N, 7/16 DIN	60
WA80	2000	3	10	20, 30, 40	N, 7/16 DIN	68

* Other attenuation values and connector configurations are available

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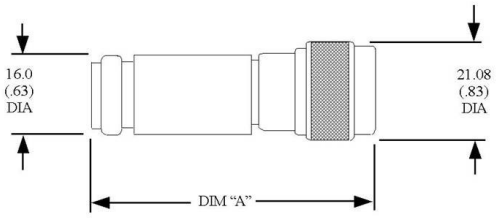
Fixed Coaxial Attenuator WA1 & WA2

WA1/6:DC – 6 GHz
WA1: DC – 12.4 GHz
WA2: DC – 18.0 GHz

5 WATTS



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1/6: DC - 6 GHz.
WA1: DC - 12.4 GHz.
WA2: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: <0.005 dB/dB/W. Bidirectional in power.

Power Rating: **5 W** average. Maximum rated average power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 kW** peak (5 µsec pulse width; 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost. *Model WA2 is also available in a calibrated attenuator set WAS-6 (3, 6, 10 and 20dB) with certificate of calibration.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB		
	WA1(/6)	WA1	WA2
1 to 2	0.4	0.4	0.5
3 to 9	0.3	0.3	0.3
10 to 20	0.5	0.5	0.5
21 to 40	0.75	0.75	1.0
41 to 50	0.75	0.75	1.25
51 to 60	1.0	1.0	1.50

Maximum VSWR

Frequency (GHz)	VSWR		
	WA1(/6)	WA1	WA2
DC - 4.0	1.15	1.15	1.15
4.0 - 8.0	1.20	1.20	1.20
8.0 - 12.4	N/A	1.25	1.25
12.4 - 18.0	N/A	N/A	1.40

Weight (All Models):

01-30 dB	70 (2.6)
31-60 dB	100 (3.6)

Dimensions:

Attenuation (dB)	Dim "A"
1 – 30	57.2 (2.25)
31 – 60	67.4 (2.65)

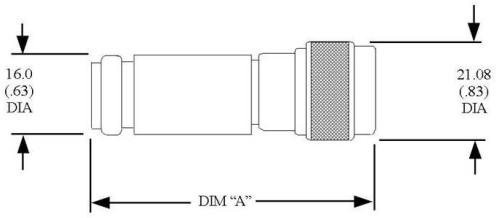
Diameter: 16.0 (0.63).

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA1W & WA2W

WA1W/6: DC – 6.0 GHz
WA1W: DC – 12.4 GHz
WA2W: DC – 18.0 GHz

2 WATTS



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1W/6: DC - 6 GHz.
WA1W: DC - 12.4 GHz.
WA2W: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: <0.005 dB/dB/W. Bidirectional in power.

Power Rating: **5 W** average. Maximum rated average power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 kW** peak (5 µsec pulse width; 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB		
	WA1W/6	WA1W	WA2W
1 to 2	0.4	0.4	0.5
3 to 9	0.3	0.3	0.3
10 to 20	0.50	0.75	0.5
21 to 40	0.75	1.00	1.00
41 to 50	0.75	1.00	1.25
51 to 60	1.0	N/A	1.50

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA1W/6	WA1W	WA2W
DC - 4.0	1.15	1.15	1.15
4.0 - 8.0	1.20	1.20	1.20
8.0 - 12.4	N/A	1.25	1.25
12.4 - 18.0	N/A	N/A	1.40

Weight (All Models):

01-30 dB	70 (2.6)
31-60 dB	100 (3.6)

Dimensions:

Attenuation (dB)	Dim "A"
1 – 30	57.2 (2.25)
31 – 60	67.4 (2.65)

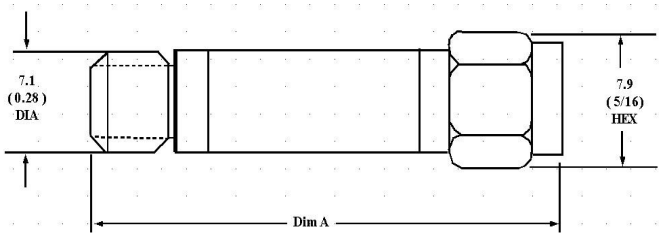
Diameter: 16.0 (0.63).

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA3 & WA4

WA3/6: DC – 6 GHz
WA3: DC – 12.4 GHz
WA4: DC – 18.0 GHz

2 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3/6: DC - 6 GHz.
WA3: DC - 12.4 GHz.
WA4: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125°C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper female and stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3(/6)	WA4
0 - 12	0.3	0.5
13 - 20	0.5	0.7
21 - 40	0.75	1.0
41 - 60	1.0	1.5

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3(/6)	WA4
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Dimensions and Weight:

Attenuation (dB)	All Models	
	Length (Dim "A")	Weight
1 - 12	31.2 (1.23)	3.9 (.14)
13 - 20	33.3 (1.31)	4.3 (.15)
21 - 30	35.3 (1.41)	4.9 (.17)
31 - 60	43.4 (1.71)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

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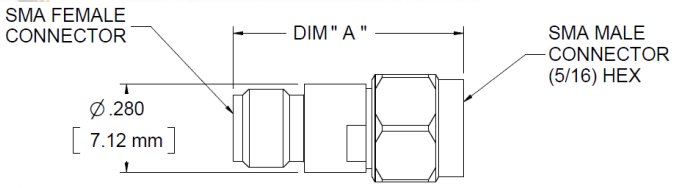
Fixed Coaxial Attenuator WA3C & WA4C

WA3C/6: DC – 6 GHz
WA3C: DC – 12.4 GHz
WA4C: DC – 18.0 GHz

2 WATTS



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Our most compact 2W model.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3C/6: DC - 6 GHz.
WA3C: DC - 12.4 GHz.
WA4C: DC - 18.0 GHz.

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **250 W** peak (5µsec pulse width, 0.4% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper female and stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3C(/6)	WA4C
0 - 6	0.3	0.3
7 - 20	0.5	0.5
21 - 30	0.75	0.75

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3C(/6)	WA4C
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Weight (Both Models):

1 - 12 dB	3.9 (0.14)
13 - 30 dB	4.3 (0.15)

Dimensions:

Attenuation (dB)	Dim "A"
1 – 12	19.3 (0.76)
13 – 30	22.6 (0.89)

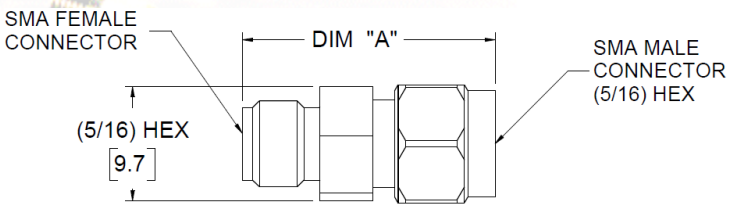
Diameter: 7.1 (0.28).

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA3CH & WA4CH

WA3CH/6: DC – 6 GHz
WA3CH: DC – 12.4 GHz
WA4CH: DC – 18.0 GHz

2 WATTS



Features

Hex body variant of our most compact 2W model.

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3CH/6: DC - 6 GHz.
WA3CH: DC - 12.4 GHz.
WA4CH: DC - 18.0 GHz.

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **250 W** peak (5µsec pulse width, 0.4% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper female and stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3CH(/6)	WA4CH
0 - 6	0.3	0.3
7 - 20	0.5	0.5
21 - 30	0.75	0.75

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3CH(/6)	WA4CH
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Weight (Both Models):

1 - 12 dB	3.9 gm/ 0.14 oz.
13 - 30 dB	4.3 gm/ 0.15 oz.

Dimensions:

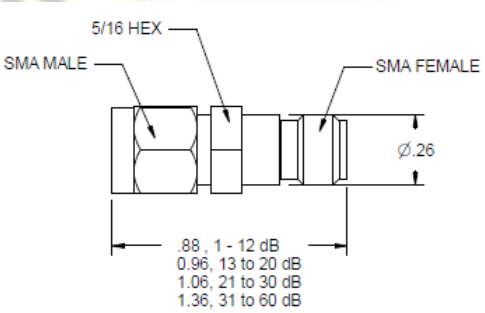
Attenuation (dB)	Dim "A"
1 – 12	19.3 (0.76)
13 – 30	22.6 (0.89)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA3H & WA4H

WA3H/6: DC – 6 GHz
WA3H: DC – 12.4 GHz
WA4H: DC – 18.0 GHz

2 WATTS



Features

Hex body.

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3H/6: DC - 6 GHz.
WA3H: DC - 12.4 GHz.
WA4H: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at +125° C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper female and stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3H(/6)	WA4H
0 - 12	0.3	0.5
13 - 20	0.5	0.7
21 - 40	0.75	1.0
41 - 60	1.0	1.5

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3H(/6)	WA4H
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Dimensions:

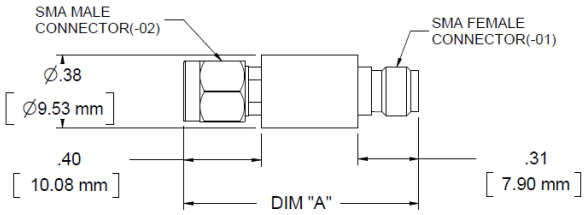
Attenuation (dB)	All Models	
	Length	Weight
1 - 12	22.4 (.88)	3.9 (.14)
13 - 20	24.4 (.96)	4.3 (.15)
21 - 30	27.0 (1.06)	4.9 (.17)
31 - 60	34.6 (1.36)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA3M & WA4M

WA3M/6: DC – 6 GHz
WA3M: DC – 12.4 GHz
WA4M: DC – 18.0 GHz

2 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3M/6: DC - 6 GHz.
WA3M: DC - 12.4 GHz.
WA4M: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **500 W** peak (5µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts, stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3M(/6)	WA4M
0 - 12	0.3	0.5
13 - 20	0.5	0.7
21 - 40	0.75	1.0
41 - 60	1.0	1.5

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3M(/6)	WA4M
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Dimensions and Weight:

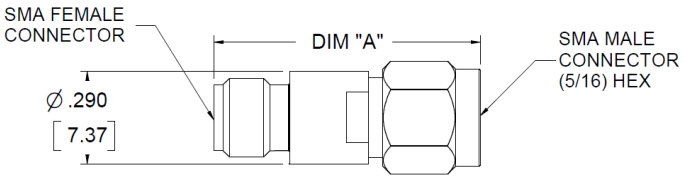
Attenuation (dB)	All Models		
	Length (Dim "A')	Diameter	Weight
1 - 12	31.2 (1.23)	9.1 (.36)	3.9 (.14)
13 - 20	33.3 (1.31)	9.1 (.36)	4.3 (.15)
21 - 30	35.3 (1.41)	9.1 (.36)	4.9 (.17)
31 - 60	43.4 (1.71)	9.1 (.36)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA3T & WA4T

WA3T/6: DC – 6 GHz
WA3T: DC – 12.4 GHz
WA4T: DC – 18.0 GHz

2 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA3T/6: DC - 6 GHz.
WA3T: DC - 12.4 GHz.
WA4T: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **500 W** peak (5µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA3T(/6)	WA4T
0 - 12	0.3	0.5
13 - 20	0.5	0.7
21 - 40	0.75	1.0
41 - 60	1.0	1.5

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA3T(/6)	WA4T
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

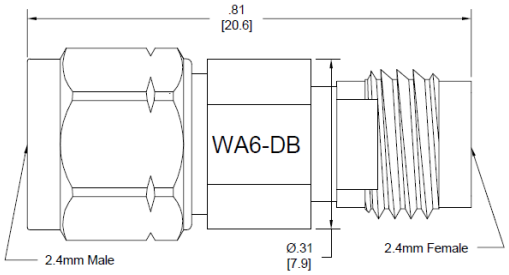
Dimensions:

Attenuation (dB)	All Models	
	Length (Dim "A")	Weight
1 - 12	22.4 (.88)	4.0 (.14)
13 - 20	24.4 (.96)	4.5 (.16)
21 - 30	26.9 (1.06)	5.0 (.18)
31 - 60	34.5 (1.36)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA6 & WA6A

WA6 - DC - 50 GHz **1 WATT**
WA6A - DC - 50 GHz **2 WATTS**



Features

2.4 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 50 GHz.

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W: Bidirectional in power.

Power Rating: 1 W (WA6) or **2W (WA6A)** average to 25°C ambient temperature, de-rated linearly to 0.1 W at 125° C, **250 W** peak (2 µsec pulse width, 0.02% duty cycle).

Temperature Range: -65°C to +125°C.

Temperature Coefficient: <0.0006 dB/dB/°C

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB		
	DC - 26.5 GHz	26.5 - 40 GHz	40 - 50 GHz
3, 6, 10	0.50	1.00	1.50
20	0.80	1.25	2.00
30	1.00	1.50	2.00

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 18	1.35
18 - 40	1.60
40 - 50	1.75

Dimensions:

Body Diameter: 7.9 (0.31)
Weight: 4.5 (0.16)
Length: 20.6 (0.81)

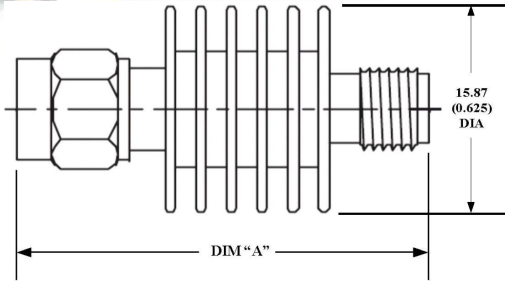
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA7

WA7/6: DC – 6 GHz
WA7/12: DC – 12.4 GHz
WA7: DC – 18.0 GHz

5 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Our compact design allows for one of the lowest size to power ratios available.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA7/6: DC - 6 GHz.
WA7/12: DC - 12.4 GHz.
WA7: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5W** average to 25°C ambient temperature, de-rated linearly to 0.5W at 125° C, **1kW** peak (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA7
1 - 2	0.5
3 - 9	0.3
10 - 20	.5
21 -40	1.0
50	1.25
60	1.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA7
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.4

Dimensions:

Attenuation (dB)	WA7	
	Length (Dim "A')	Weight
1 - 30	30.5 (1.2)	11 (.36)
31 - 60	38.1 (1.5)	18 (.41)

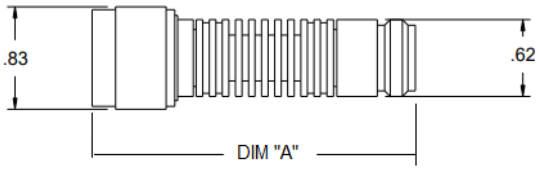
Diameter: 15.87 (0.625)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA8

WA8/6: DC – 6 GHz
WA8/12: DC – 12.4 GHz
WA8: DC – 18.0 GHz

10 WATTS



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA8/6: DC - 6 GHz.
WA8/12: DC - 12.4 GHz.
WA8: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **10W** average to 25°C ambient temperature, 0W at +125° C, **1kW** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA8
1 - 2	0.5
3 - 9	0.3
10 - 20	.5
21 -40	1.0
50	1.25
60	1.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA8
DC - 6.0	1.20
6.0 - 8.0	1.20
8.0 - 12.4	1.30
12.4 - 18.0	1.35

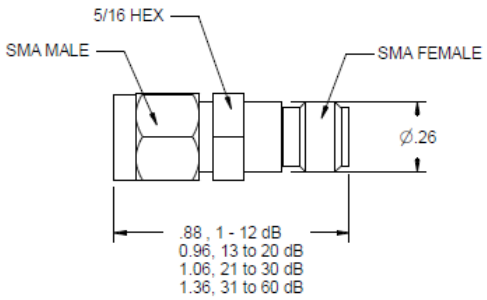
Length (Dim "A"): 67.30 (2.62)

Weight: 0.074 (2.6)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA9

DC - 26.5 GHz 2 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Usable to 30 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 0.5W at 125° C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors, gold plated beryllium copper female and stainless steel male contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Calibrated Attenuator Set (WAS-19): *Model WA9 is also available in a Calibrated Attenuator Set (3, 6, 10, and 20 dB). Refer to Attenuator Set data sheets for specifications.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 3	0.50
3 - 6	0.60
6 - 10	0.80
20, 30	1.20
40, 50, 60	2.0

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35
18.0 - 26.5	1.50

Dimensions:

Attenuation (dB)	All Models	
	Length	Weight
1 - 12	22.4 (.88)	3.9 (.14)
13 - 20	24.4 (.96)	4.3 (.15)
21 - 30	27.0 (1.06)	4.9 (.17)
31 - 60	34.6 (1.36)	6.5 (.23)

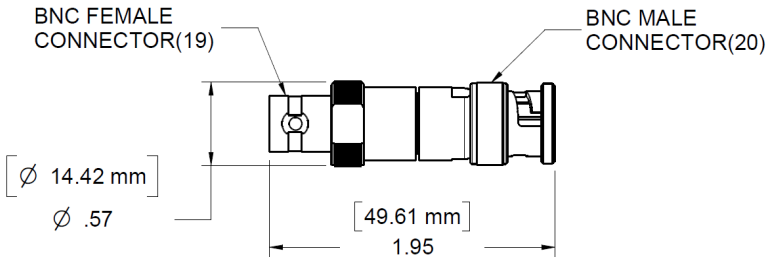
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA18

DC - 6.0 GHz

2 WATTS



Features

BNC connectors mate non-destructively with MIL-PRF-39012. Broad frequency range, optimized for wireless applications.
Usable to 12 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 6.0 GHz
(Usable to 12.0 GHz)

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to **0 W** at 125° C, **1kW** peak (5 µsec pulse width, 0.1% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body with nickel plated brass connectors. Gold plated beryllium copper female and stainless steel male contacts. RoHs Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 6	0.3
7 - 30	0.5

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.25
4.0 - 6.0	1.30

Dimensions:

Diameter:	14.2 (0.57)
Weight:	32.3 (1.14)
Length:	49.6 (1.95)

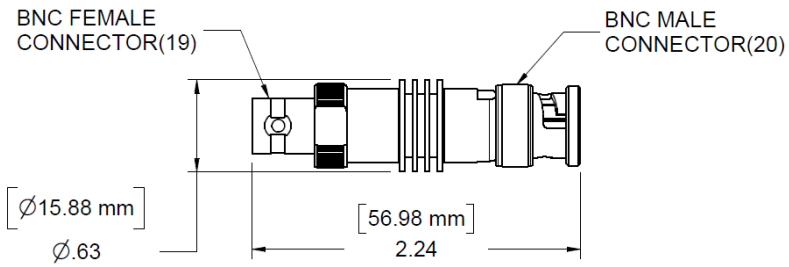
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA19

DC - 6.0 GHz

5 WATTS



Features

BNC connectors mate non-destructively with MIL-PRF-39012. Broad frequency range, optimized for wireless applications.
Usable to 12 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 6.0 GHz
(Usable to 12.0 GHz)

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5 W** average to 25°C ambient temperature, de-rated linearly to .5 W at 125° C, **1 kW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black anodized aluminum body with nickel plated brass connectors. Gold plated beryllium copper female, stainless steel male contacts. RoHs Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 6	0.40
7 - 30	0.90

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.25
4.0 - 6.0	1.30

Dimensions and Weight:

Diameter:	15.88 (0.63)
Weight:	34.0 (1.20)
Length:	56.98 (2.24)

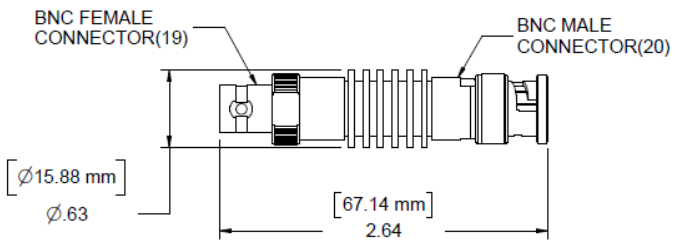
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA20

DC - 6.0 GHz

10 WATTS



Features

BNC connectors mate non-destructively with MIL-PRF-39012. Broad frequency range, optimized for wireless applications.
Usable to 12 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 6.0 GHz
(Usable to 12.0 GHz)

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **10 W** average to 25°C ambient temperature, de-rated linearly to .5 W at 125° C, **1 kW** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black anodized aluminum body with nickel plated brass connectors. Gold plated beryllium copper female and stainless steel male contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 6	0.40
7 - 30	0.90

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.25
4.0 - 6.0	1.30

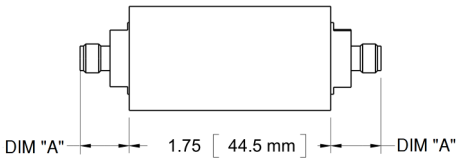
Dimensions:

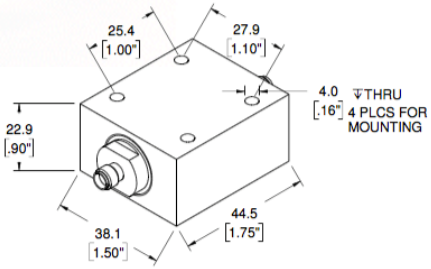
Diameter:	15.88 (0.63)
Weight:	39.7 (1.40)
Length:	67.14 (2.64)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA21 & WA22

WA21: DC – 4 GHz
WA22: DC – 8.5 GHz **25 WATTS**





Features

Low-profile, mountable attenuator.
Type N, TNC and SMA stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA21: DC - 4 GHz.
WA22: DC - 8.5 GHz.

Nominal dB Values: WA21: 1 - 40 dB
WA22: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **25W** average with case temperature held to 100°C using conductive heat sink. **5kW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA21	WA22
1 - 2	0.4	0.4
3 - 20	0.3	0.3
21 - 30	1.0	0.6
31 - 40	1.5	N/A

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA21	WA22
DC - 4.0	1.2	1.25
4.0 - 8.5	N/A	1.3

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

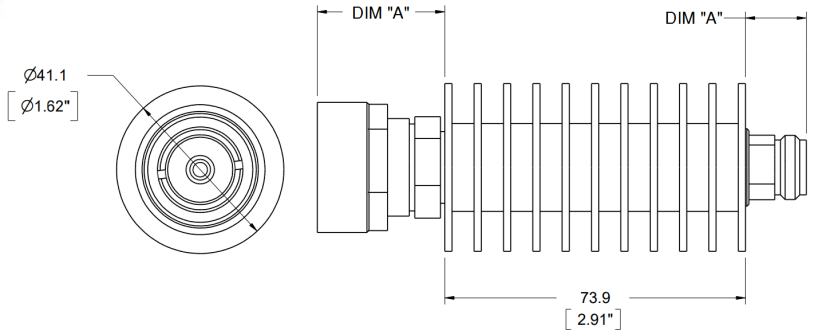
Weight: 170 (6.0)
Height: 22.9 (0.90)
Width: 38.1 (1.50)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Fixed Coaxial Attenuator WA23 & WA24

WA 23: DC - 4 GHz
WA 24: DC - 8.5 GHz **50 WATTS**



Features

Type N, SMA, TNC or DIN 7/16 stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA23: DC - 4 GHz
WA24: DC - 8.5 GHz

Nominal dB Values: 1 - 40 dB
(50 dB available in a unidirectional variant)

Power Coefficient: < 0.0005 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** average to 25°C ambient temperature, de-rated linearly to 5 watts at 125° C. **5kW** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA23	WA24
1 - 2	0.5	0.75
3 - 20	0.4	0.75
21 - 30	0.6	1.0
31 - 40	0.8	1.2

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

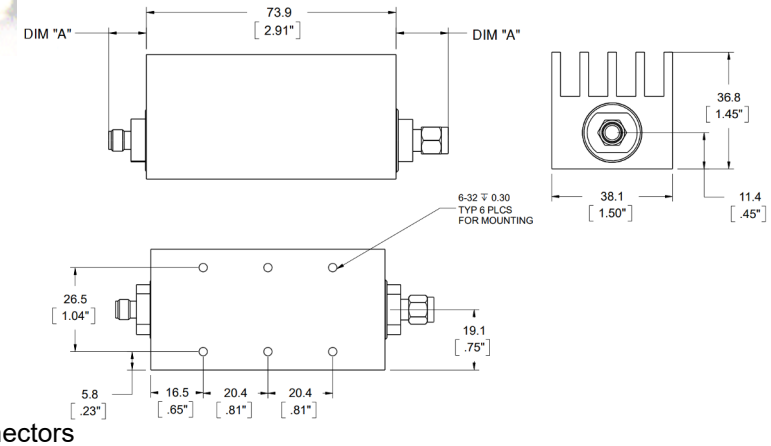
Weight: 280 (9.88)
Diameter: 41.1 (1.62)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA23B & WA24B

WA23B: DC - 4 GHz
WA24B: DC - 8.5 GHz **50 WATTS**



Features

Type N, SMA, or TNC stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Passive convection cooling, flat base with mounting holes.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA 23B: DC - 4GHz
WA 24B: DC - 8.5GHz

Nominal dB Values: 3 - 40 dB
(50 dB available in a unidirectional variant)

Power Coefficient: < 0.0005 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** average to 25°C ambient temperature, de-rated linearly to 2.5 watts at 125° C. **5kW** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA23B	WA24B
1 - 2	0.5	0.75
3 - 20	0.4	0.75
21 - 30	0.6	1.0
31 - 40	0.8	1.2

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA23B	WA24B
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

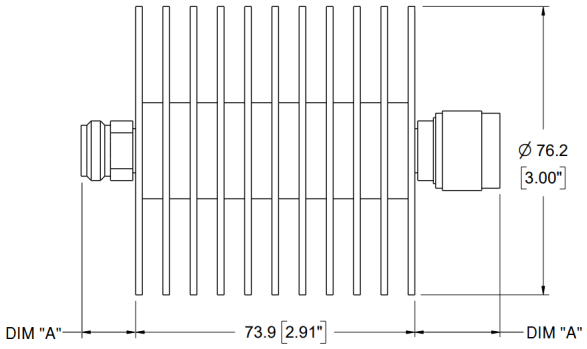
Weight: 280 (9.88)
Height: 36.8 (1.45)
Width: 38.1 (1.50)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Fixed Coaxial Attenuator WA26 & WA27

WA 26: DC - 4.0 GHz
WA 27: DC - 8.5 GHz **100 WATTS**



Features

Type N, SMA, TNC, or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA29/4: DC - 4.0 GHz
WA29: DC - 8.5 GHz

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **100 W** average to 25°C ambient temperature, de-rated linearly to 5 watts at 125° C, **5 KW** peak (5µsec pulse width, 1% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
3 - 20	0.75
21 - 30	1.00

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.25
4.0 - 8.5	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

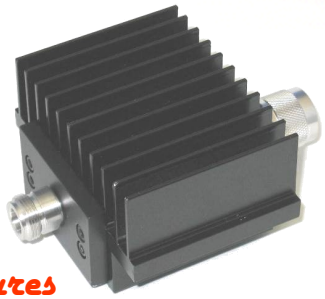
Weight: .55kg (19.2)
Diameter: 76.2 (3.00)

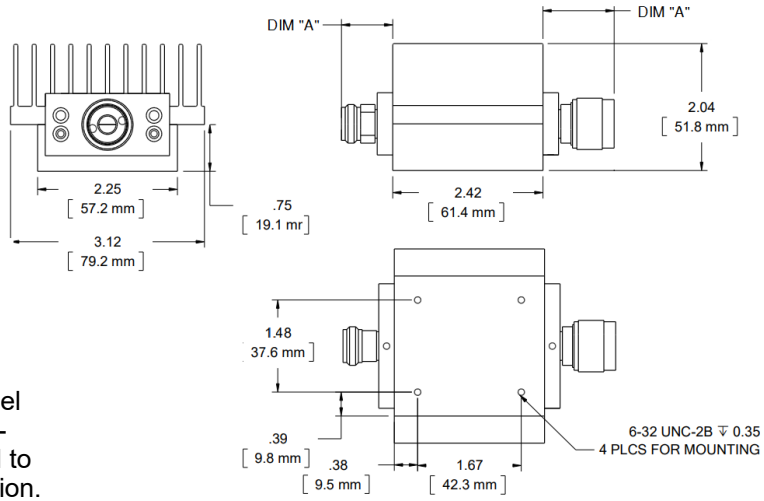
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA29

WA 29/4: DC - 4.0 GHz
WA 29: DC - 8.5 GHz

75 WATTS





Features

Type N, SMA, TNC, or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Passive cooling, flat base with mounting holes.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA29/4: DC - 4.0 GHz
WA29: DC - 8.5 GHz

Nominal dB Values: 3 - 40 dB
(50 dB available in a unidirectional variant)

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **75 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at +125° C, **5 KW** peak (5µsec pulse width, 0.4% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA29/4	WA29
3 - 20	0.4	0.75
21 - 30	1.0	1.0
31 - 40	0.8	1.2

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA29/4	WA29
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	17.7 (.70)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

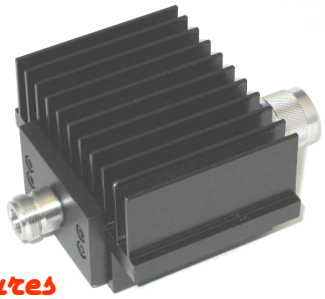
Weight: .55kg (19.2)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

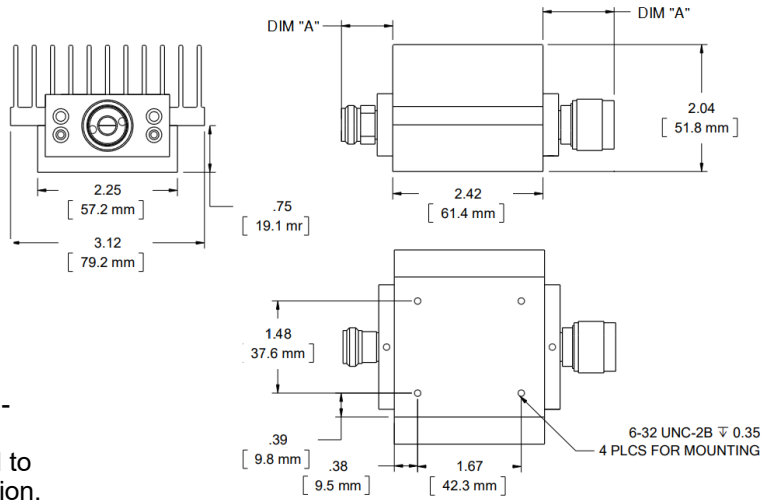
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA30 & WA31

WA 30: DC - 4.0 GHz
WA 31: DC - 8.5 GHz

100 WATTS





Features

Type N, SMA, or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Passive cooling, flat base with mounting holes.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA30: DC - 4.0 GHz
WA31: DC - 8.5 GHz

Nominal dB Values: 3 - 30 dB
(40 dB WA30 available in a unidirectional variant)

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **75 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at +125° C, **5 KW** peak (5µsec pulse width, 0.4% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA29/4	WA29
3 - 20	0.4	0.75
21 - 30	1.0	1.0
31 - 40	0.8	1.2

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA29/4	WA29
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.4 (.57)
N-Type M -04	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

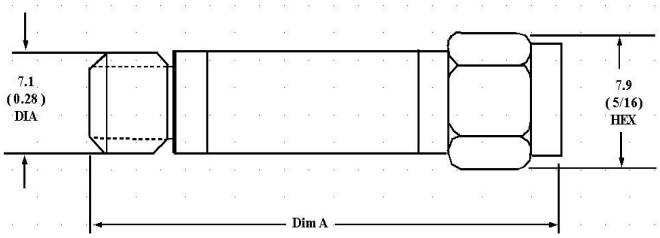
Weight: .55 (19.2)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA32

DC - 18 GHz 2 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Screened for military applications.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 1.25 W at 75° C and 0.5 W at 125°C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper female contact, stainless steel male contact RoHs Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 6	0.30
7 - 12	0.50
13 - 20	0.70
21 - 40	1.00
41 - 60	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

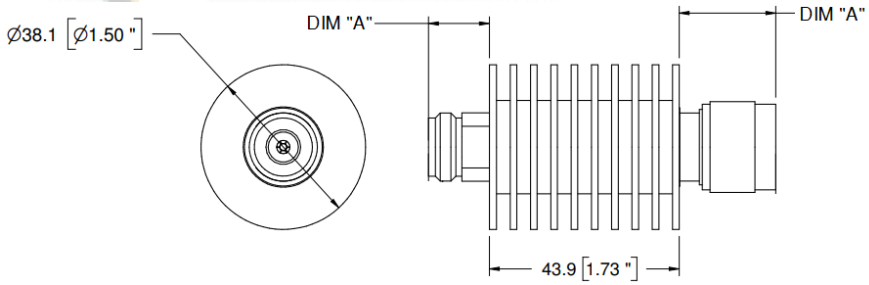
Dimensions:

Attenuation (dB)	WA32	
	Length (Dim "A"')	Weight
1 - 12	31.2 (1.23)	3.9 (.14)
13 - 20	33.3 (1.31)	4.3 (.15)
21 - 30	35.3 (1.41)	4.9 (.17)
31 - 60	43.4 (1.71)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA33 & WA34

WA 34: DC - 4.0 GHz
WA 33: DC - 8.5 GHz **25 WATTS**



Features

Type N, SMA, or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA34: DC - 4.0 GHz
WA33: DC - 8.5 GHz

Nominal dB Values: 1 - 30, 40 dB (WA34)

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: Power Rating: 25 W average to 25°C ambient temperature, de-rated linearly to 2.5 watts 125° C, **5 KW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA33	WA34
1 - 2	0.80	0.40
3 - 20	0.60	0.30
21 - 30	1.0	0.60
40 dB	N/A	1.0

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA33	WA34
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (0.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: .17 (6.0)
Diameter: 22.90 (0.90)

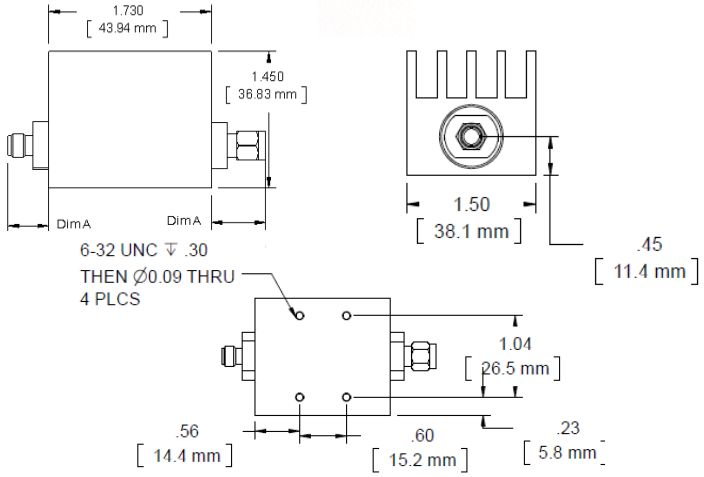
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

WEINSCHEL ASSOCIATES
TEL: 877.948.8342 / 301.963.4630 ♦ Fax: 301.963.8640
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

Fixed Coaxial Attenuator WA33B & WA34B

WA 34B: DC - 4.0 GHz
WA 33B: DC - 8.5 GHz **25 WATTS**



Features

Type N, SMA, or TNC stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Passive cooling, flat base with mounting holes.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA34B: DC - 4.0 GHz
WA33B: DC - 8.5 GHz

Nominal dB Values: 1 - 30, 40 dB (WA34)

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **25 W** average to 25°C ambient temperature, de-rated linearly to 2.5 watts 125° C, **5 KW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA33B	WA34B
1 - 2	0.80	0.40
3 - 20	0.60	0.30
21 - 30	1.0	0.60
40 dB	N/A	1.0

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA33B	WA34B
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

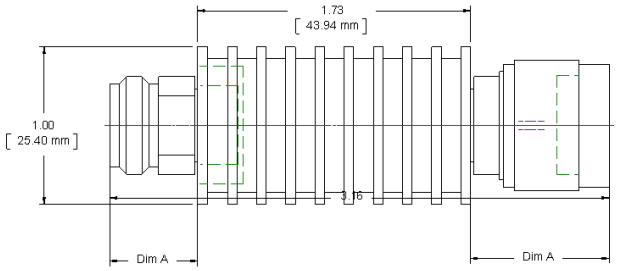
Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.17 (6.06)
Height: 36.8 (1.45)
Width: 38.1 (1.50)
Mounting: 4x 6-32 UNC, 0.09 Thru

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA33L & WA34L

WA 34L: DC - 4.0 GHz
WA 33L: DC - 8.5 GHz **20 WATTS**



Features

Type N, SMA, TNC, or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA34L: DC - 4.0 GHz
WA33L: DC - 8.5 GHz

Nominal dB Values: 1 - 30, 40 dB (WA34L)

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **20 W** average to 25°C ambient temperature, de-rated linearly to 2 watts 125° C, **5 KW** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body wit passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA33L	WA34L
1 - 2	0.80	0.40
3 - 20	0.60	0.30
21 - 30	1.0	0.60
40 dB	N/A	1.0

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA33L	WA34L
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	17.3 (.68)
TNC M -06	14.1 (.56)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: .12 (4.2)
Diameter: 25.4 (1.0)

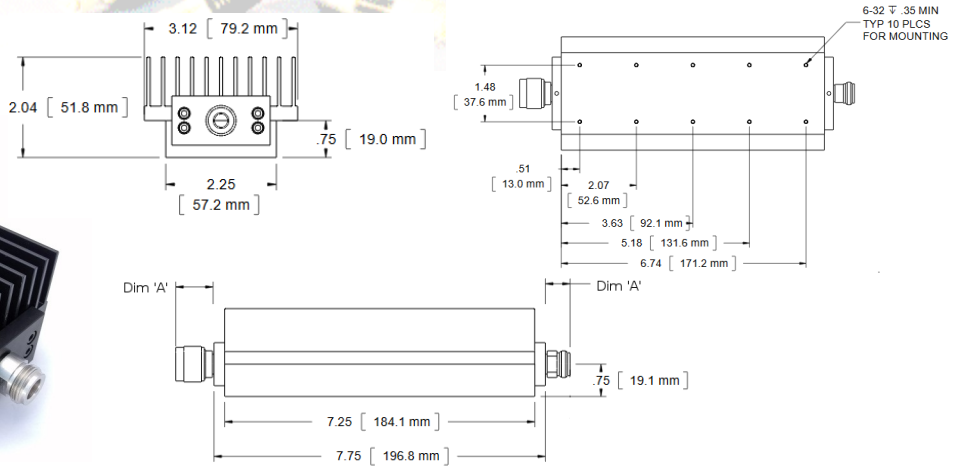
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA35

WA 35: DC - 8.5 GHz

250 WATTS



Features

Type N or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Passive cooling, flat base with mounting holes.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **250 W** average to 25°C ambient temperature, de-rated linearly to 25 watts at 125° C, **5 KW** peak (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA35
10 - 30	0.75
40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA35
DC - 4.0	1.30
4.0 - 8.5	1.45

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	10.9 (.43)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.30 (45.9)
Height: 51.8 (2.04)
Width: 79.2 (3.12)
Mounting Holes: 6-32 TYP 10 PLCS

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

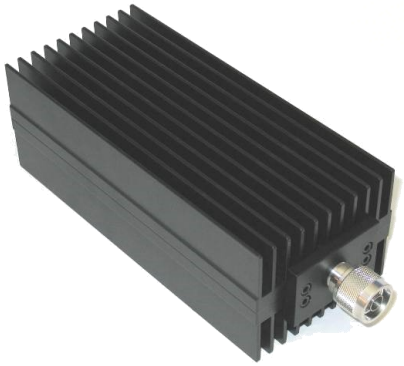
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

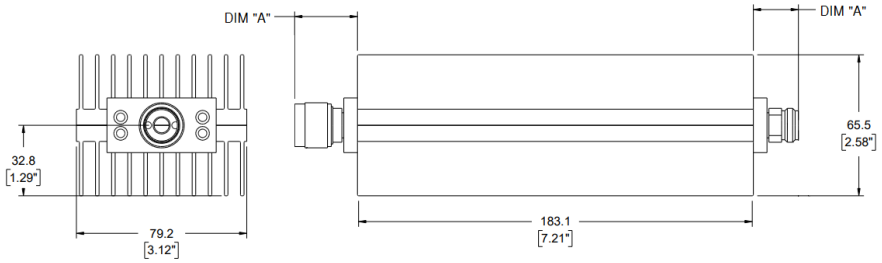
Fixed Coaxial Attenuator

WA36

DC - 8.5 GHz

300 WATTS





Features

Type N or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **300 W** average to 25°C ambient temperature, de-rated linearly to 25 watts at 125° C, **5 KW** peak (5µsec pulse width, 3% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA36
10 - 30	0.75
40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA36
DC - 4.0	1.30
4.0 - 8.5	1.45

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.30 (45.9)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

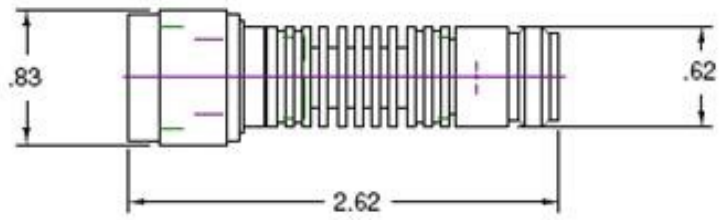
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator

WA37

DC - 8.5 GHz

10 WATTS



Features

Type N stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **10 W** average to 25°C ambient temperature, de-rated linearly to 1 watt 125° C, **1 KW** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA37
1 - 2	0.50
3 dB	0.30
4 - 5	0.50
6 dB	0.30
7 - 19	0.50
20 - 25	0.70
26 - 30	0.80
31 - 60	1.20

Maximum VSWR:

Frequency (GHz)	VSWR
	WA37
DC - 4.0	1.15
4.0 - 8.0	1.45

Dimensions and Weight:

Diameter (max): 21.08 (.83)
Length: 66.55 (2.62)
Weight (nominal): 90 (3.17)

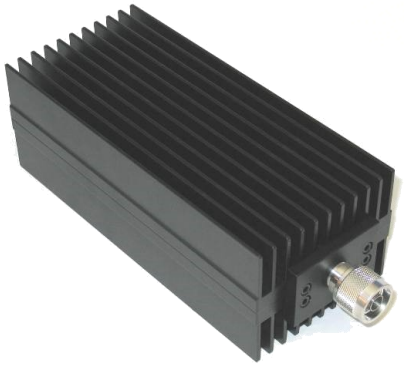
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

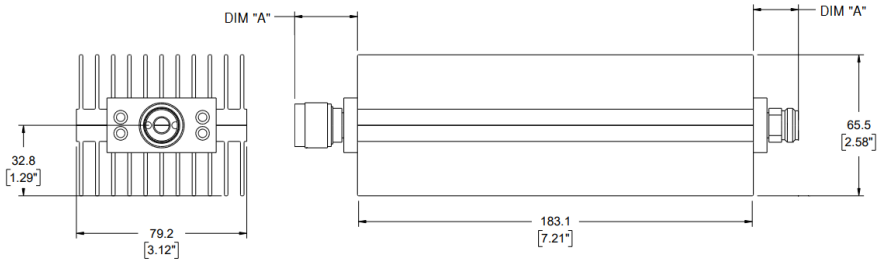
Fixed Coaxial Attenuator

WA38

DC - 5.0 GHz

300 WATTS





Features

Type N or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 5.0 GHz

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **300 W** average to 25°C ambient temperature, de-rated linearly to 25 watts at 125° C, **10 KW** peak (5µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA38
10 - 30	0.75
40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA38
DC - 2.0	1.25
2.0 - 5.0	1.45

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.30 (45.9)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

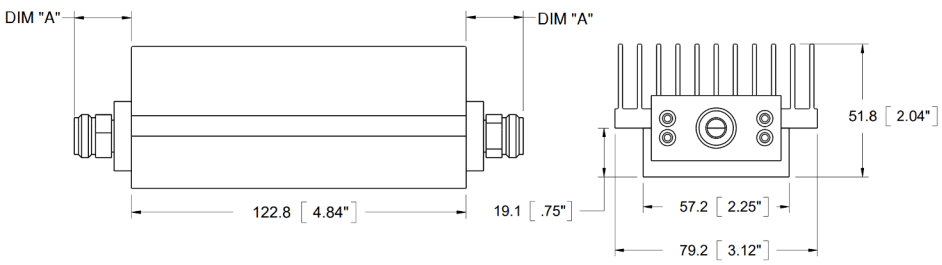
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator

WA39

DC – 4.0 GHz

150 WATTS



Features

Type N, DIN 7/16, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Nominal dB Values: 3 – 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, derated linearly to 15 W at 125° C. **5 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA39
3 - 30	0.40
40	0.50

Maximum VSWR: 1.25

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

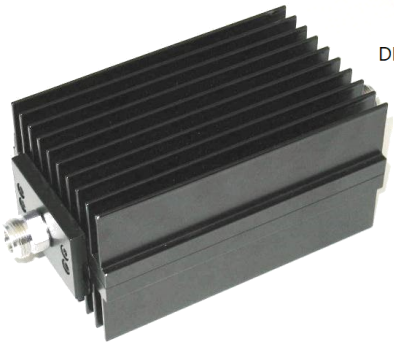
Weight: 0.90 (31.8)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

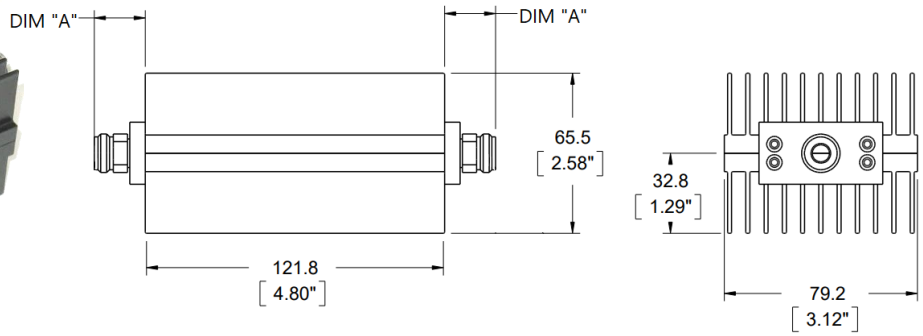
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA40

DC – 3.0 GHz 150 WATTS





Features

Type N, 7/16 DIN, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: 150 W maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125° C. **10 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA40
3 - 40	0.50

Maximum VSWR: 1.10

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 1.0 (35.3)
Height: 65.5 (2.58)
Width: 79.2 (3.12)

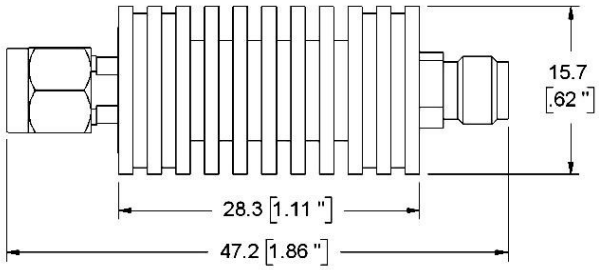
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA41

WA41/6: DC – 6 GHz
WA41/12: DC – 12.4 GHz
WA41: DC – 18.0 GHz

10 WATTS



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA41/6: DC - 6 GHz.
WA41/12: DC - 12.4 GHz.
WA41: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **10W** average to 25°C ambient temperature, de-rated linearly to 0W at 125° C, **1kW** peak (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA41 (/6, /12)
1 - 2	0.50
3 dB	0.30
4 - 5	0.50
6 dB	0.30
7 - 19 dB	0.50
20 - 25	0.70
26 - 30	1.0
31 - 60	1.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA41 (/6, /12)
DC - 6.0	1.20
6.0 - 12.4	1.30
12.4 - 18	1.35

Dimensions and Weight:

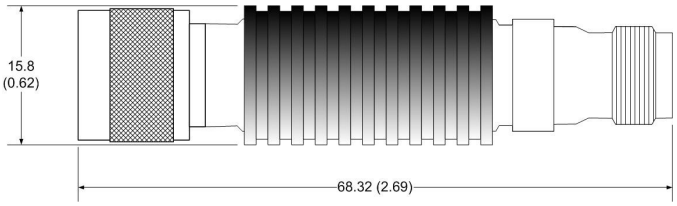
Attenuation (dB)	WA41 (/6, /12)		
	Length	Diameter	Weight
1 - 60	47.2 (1.86)	15.7 (.62)	.03 (1.06)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA41T

WA41T/6: DC – 6 GHz
WA41T/12: DC – 12.4 GHz
WA41T: DC – 18.0 GHz

10 WATTS



Features

TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA41T/6: DC - 6 GHz.
WA41T/12: DC - 12.4 GHz.
WA41T: DC - 18.0 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **10W** average to 25°C ambient temperature, de-rated linearly to 0W at 125° C, **1kW** peak (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA41T (/6, /12)
1 - 2	0.50
3	0.30
4 - 5	0.50
6	0.30
7 - 19	0.50
20 - 25	0.70
26 - 30	1.0
31 - 60	1.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA41T (/6, /12)
DC - 6.0	1.20
6.0 - 12.4	1.40
12.4 - 18	1.50

Dimensions:

Attenuation (dB)	WA41T (/6, /12)		
	Length	Diameter	Weight
1 - 60	59.7 (2.35)	15.8 (.62)	40.3 (1.42)

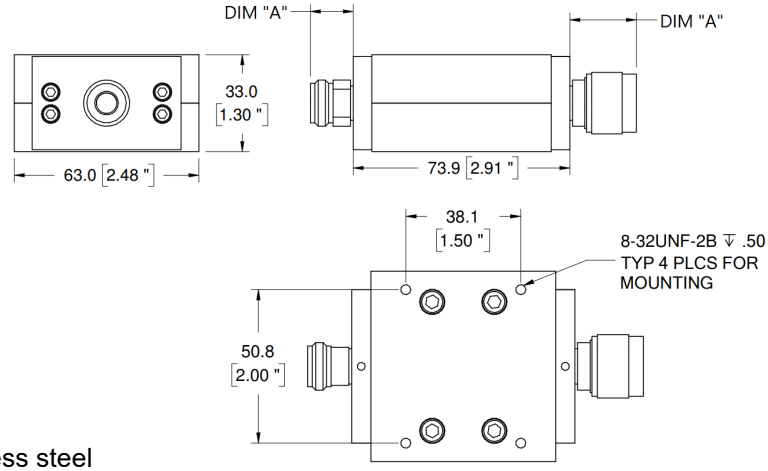
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA42

DC – 3.0 GHz

150 WATTS



Features

Type N, DIN 7/16, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. *Low profile, mountable housing.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Nominal dB Values: 3 – 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average rated power with case temperature held to 100°C using conductive heat sink. **10 kW** peak power (5 µsec pulse width, .75% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA42
3 - 40	0.50

Maximum VSWR: 1.10

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 0.5 (17.6)
Height: 33.0 (1.30)
Width: 63.0 (2.48)
Mounting: 4x 8-32, .5" deep

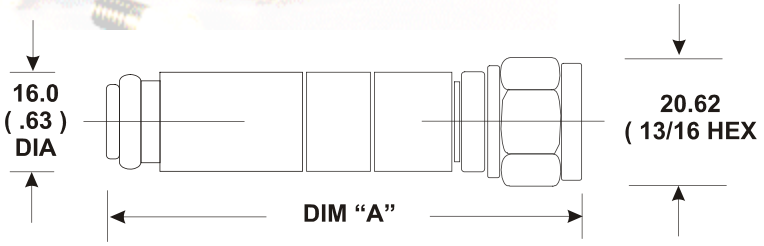
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA44

DC – 18 GHz

5 WATTS



Features

Type N-type stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Precision N-type hex connector design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz.

Nominal dB Values: 1 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5W** average to 25°C ambient temperature, de-rated linearly to 0W at 125° C, **1kW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper or stainless steel contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA44
1 - 9	0.30
10 - 20	0.50
21 - 40	1.0
41 - 60	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA44
DC - 4.0	1.15
4.0 - 12.4	1.20
12.4 - 18.0	1.25

Dimensions:

Attenuation (dB)	WA44		
	Length (Dim "A")	Diameter	Weight
1 - 30	74.4 (2.93)	16.0 (.63)	.10 (3.5)
31 - 60	84.6 (3.33)	16.0 (.63)	.13 (4.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

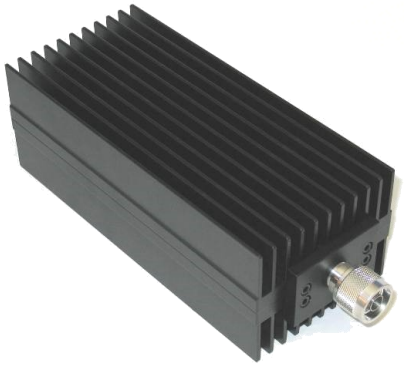
TEL: 877.948.8342 / 301.963.4630 ♦ Fax: 301.963.8640
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

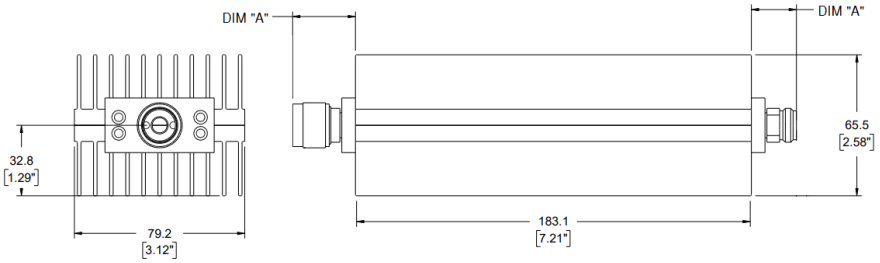
Fixed Coaxial Attenuator

WA45

WA45: DC – 2.5 GHz
WA45/3: DC – 3 GHz

250 WATTS





Features

Type N or 7/16 DIN stainless steel connectors per MIL-STD-348A, interface non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA45: DC - 2.5 GHz.
WA45/3: DC - 3.0 GHz.

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: 250 W maximum average rated power to 25°C ambient temperature, de-rated linearly to 25 W at 125°C. **10 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA45	WA45/3
10 - 40	0.50	0.70

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA45	WA45/3
DC - 3.0	1.10	1.15

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	10.9 (.43)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.30 (45.9)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

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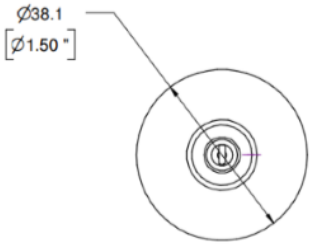
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

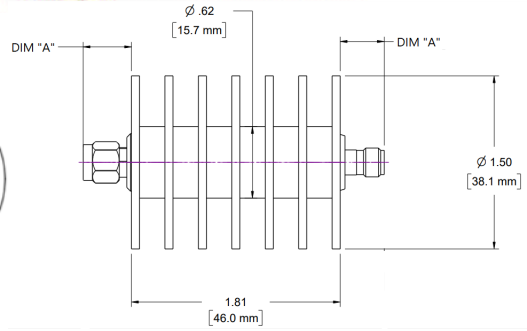
Fixed Coaxial Attenuator

WA46

WA46/12: DC – 12.4 GHz
WA46: DC – 18 GHz

25 WATTS





Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA46/12: DC - 12.4 GHz.
WA46: DC - 18 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0006 dB/dB/W; Bidirectional in power.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA46/12	WA46
3 - 10	0.50	0.50
11 - 20	0.75	0.75
21 - 40	1.0	1.0

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA46/12	WA46
DC - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18	N/A	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

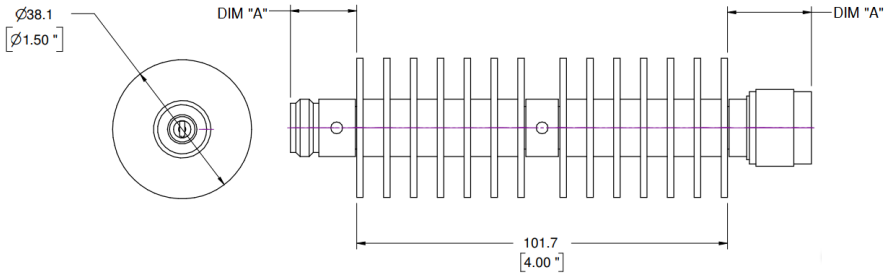
Weight: 0.11 (3.9)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA47

WA47/12: DC – 12.4 GHz
WA47: DC – 18 GHz **50 WATTS**



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA47/12: DC - 12.4 GHz.
WA47: DC - 18 GHz.

Nominal dB Values: 6 - 40 dB

Power Coefficient: < 0.0003 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA47/12	WA47
6 - 9	0.75	0.75
10	0.50	0.50
11 - 20	0.75	0.75
21 - 40	1.0	1.0

Maximum VSWR:

Frequency (GHz)	VSWR			
	WA47/12 6 dB	WA47/12 10-40 dB	WA47 6 dB	WA47 10-40 dB
DC - 8.0	1.25	1.20	1.25	1.20
8.0 - 12.4	1.35	1.25	1.35	1.25
12.4 - 18	N/A	N/A	1.45	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.21 (7.4)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

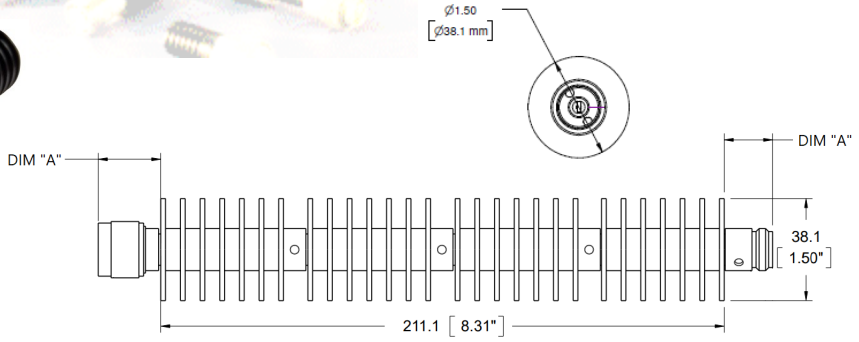
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator

WA48

WA48/12: DC – 12.4 GHz
WA48: DC – 18 GHz

100 WATTS



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA48/12: DC - 12.4 GHz.
WA48: DC - 18 GHz.

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.00015 dB/dB/W; Unidirectional in power.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, derated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA48/12	WA48
10 - 19	0.75	0.75
20	0.50	0.50
21 - 40	0.75	0.75

Maximum VSWR:

Frequency (GHz)	VSWR			
	WA48/12 10 dB	WA48/12 20-40 dB	WA48 10 dB	WA48 20-40 dB
DC - 8.0	1.40	1.25	1.40	1.25
8.0 - 12.4	1.40	1.35	1.40	1.35
12.4 - 18	N/A	N/A	1.55	1.45

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.21 (7.4)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

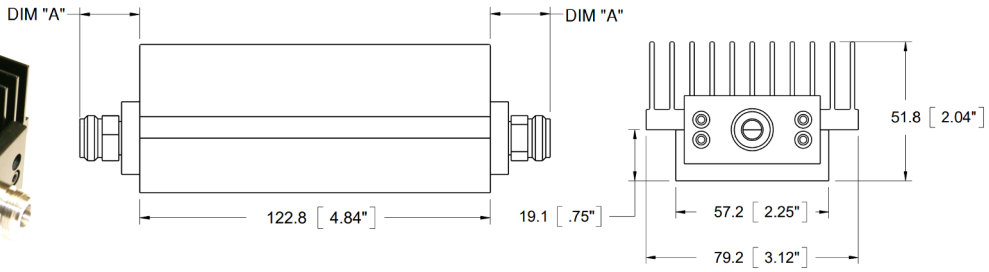
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator

WA49

DC – 8.5 GHz

150 WATTS



Features

Type N, DIN 7/16, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Nominal dB Values: 3 – 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, derated linearly to 15 W at 125° C. **5 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA49
3 - 30	0.75
40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA49
DC - 4.0	1.20
4.0 - 8.5	1.35

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

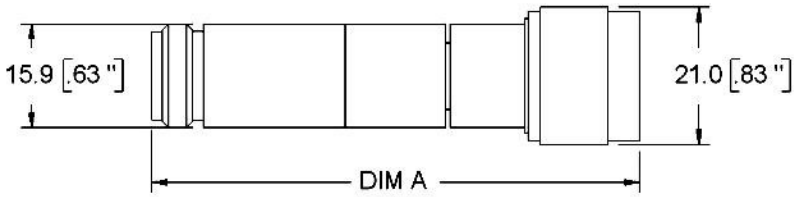
Weight: 0.90 (31.8)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA50

WA50: DC – 3.0 GHz 2.0 WATTS



Features

Type N-type stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3 GHz.

Nominal dB Values: 1 - 50 dB

Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, **1kW** peak (5 µsec pulse width, 0.1% duty cycle).

Temperature Range: -30°C to 70°C

Construction: Stainless steel barrel with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.
Model WA50 is also available in a calibrated attenuator set WAS1 (3, 6, 10 and 20dB) with certificate of calibration.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA50
0 - 12	0.50
13 - 20	0.70
21 - 40	1.0
41 - 60	1.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA50
DC - 1.0	1.15
1.0 - 3.0	1.20

Dimensions and Weight:

Attenuation (dB)	WA50		
	Length (Dim "A')	Diameter	Weight
1 - 30	74.4 (2.93)	16.0 (.63)	.10 (3.5)
31 - 60	84.6 (3.33)	16.0 (.63)	.13 (4.5)

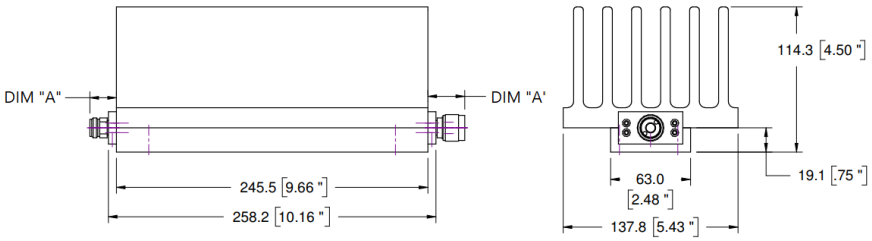
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA51

DC – 8.5 GHz

500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 8.5 GHz (mode free to 10.5 GHz)

Nominal dB Values: 10 – 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, derated linearly to 25 W at 125°C. **5 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA51
10 - 30	0.75
30 - 40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA51
DC - 4	1.10
4 - 8.5	1.45

(1.70:1 max VSWR to 10.5 GHz)

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.57)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

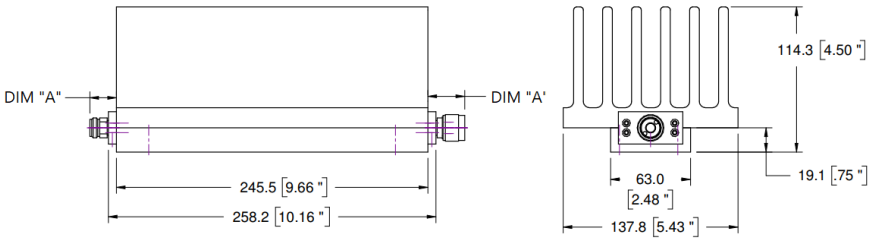
Weight: 4.1 (144.6)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA53

DC – 3.0 GHz 500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 3.0 GHz

Nominal dB Values: 3 – 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, derated linearly to 50 W at 125°C. **10 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA53
3 - 10	1.0
20 - 40	0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA53
DC - 3.0	1.10

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.57)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

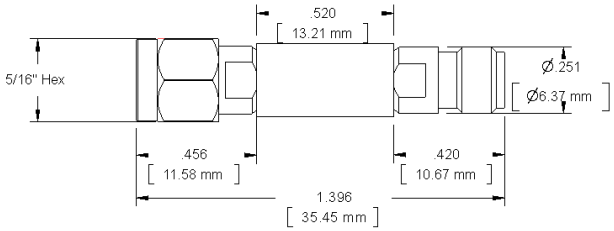
Weight: 4.1 (144.6)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA54 & WA54CH

DC - 40 GHz 2 WATTS



Features

Precision 2.92mm stainless steel M/F connectors per MIS-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.
Model WA54CH combines the performance of the WA54 with a more compact package.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40 GHz.

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 0.1W at 100° C, **200 W** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHs Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost. *Model WA54 is also available in a calibrated attenuator set WAS54 (3, 6, 10 and 20 dB) with certificate of calibration.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 20	1.0
21 - 30	2.0

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 26.5	1.25
26.5 - 40.0	1.45

Dimensions:

WA54	
Length:	35.5 (1.40)
Body Diameter:	6.4 (.25)
Weight:	.008 (.28)
WA54CH	
Length:	22.1 (0.87)
Body Diameter:	8 (.315)
Weight:	.005 (.167)

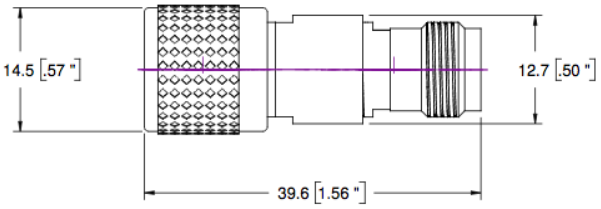
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA55

WA55/6: DC – 6.0 GHz
WA55: DC – 18 GHz

25 WATTS



Features

TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA55/6: DC - 6.0 GHz.
WA55: DC - 18 GHz.

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.1% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA55/6	WA55
1 - 6	0.30	0.40
7 - 20	0.40	0.50
21 -30	0.80	0.90

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA55/6	WA55
DC - 4.0	1.15	1.15
4.0 - 6.0	1.20	1.20
6.0 - 8.0	N/A	1.20
8.0 - 12.4	N/A	1.25
12.4 - 18.0	N/A	1.45

Dimensions and Weight (both models):

Diameter:	12.7 (.50)
Length:	39.8 (1.56)
Weight:	.03 (1.06)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

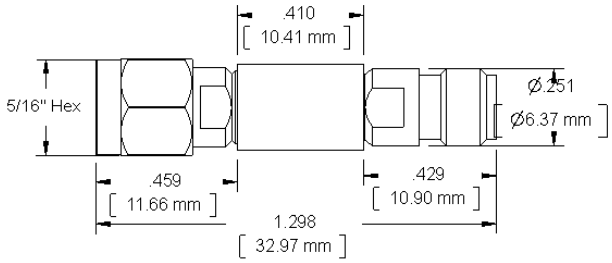
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator

WA56

DC - 32 GHz

2 WATTS



Features

3.5mm stainless steel M/F connectors per MIS-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 32 GHz.

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 0.1W at 100° C, **200 W** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHs Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC - 26.5 GHz	26.5 - 32 GHz
1, 2	0.60	0.80
3, 6	0.50	0.80
10	0.60	0.80
11 -30	0.75	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 26.5	1.25
26.5 - 32.0	1.35

Dimensions:

Length:	33.0 (1.30)
Body Diameter:	7.1 (.23)
Weight:	.008 (.28)

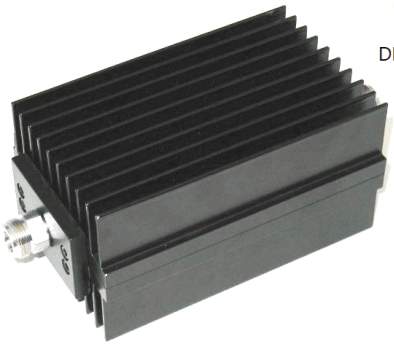
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

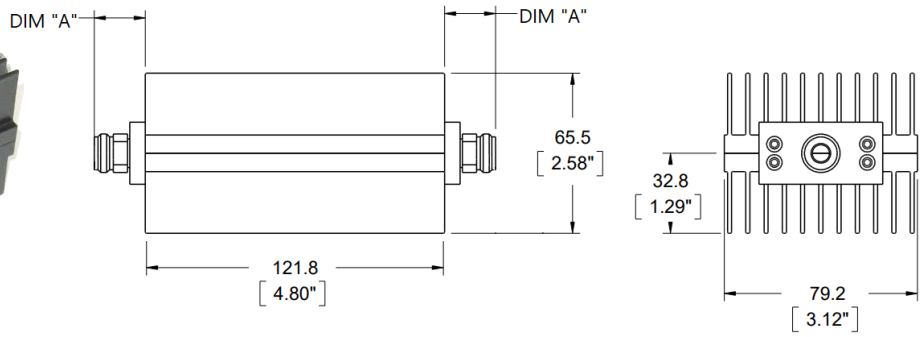
Fixed Coaxial Attenuator

WA57

DC – 5.0 GHz

150 WATTS





Features

Type N, 7/16 DIN, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 5.0 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, derated linearly to 15 W at 125° C. **10 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA57
3 - 20	1.25
21 - 40	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA57
DC - 2.0	1.10
2.0 - 5.0	1.15

Dimensions:

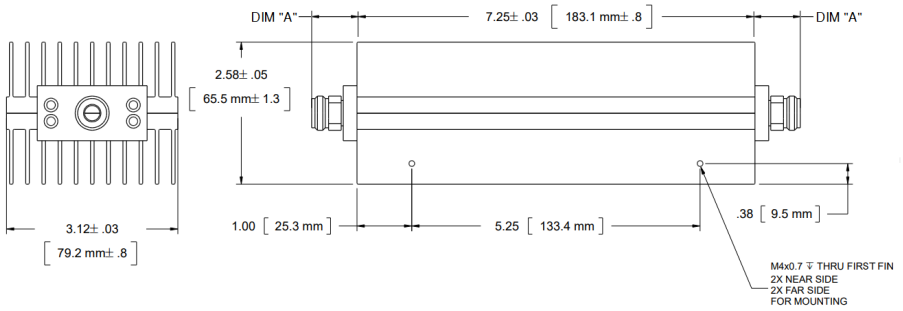
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 1.0 (35.3)
Height: 65.5 (2.58)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA58

DC – 5.0 GHz 250 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 5.0 GHz

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **250 W** maximum average rated power to 25°C ambient temperature, derated linearly to 25 W at 125°C. **10 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA58
3 - 20	1.50
21 - 40	1.75

Maximum VSWR:

Frequency (GHz)	VSWR
	WA58
DC - 2.0	1.20
2.0 - 5.0	1.25

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.57)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

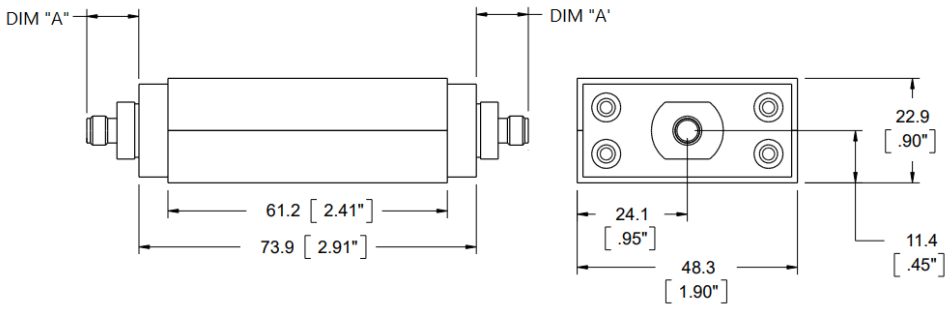
Weight: 1.3 (45.9)
Height: 65.5 (2.58)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA59

DC – 3.0 GHz 100 WATTS



Features

Type N, SMA or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. *Flat body with 6-32 mounting holes for conductive cooling.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 5.0 GHz

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **100 W** maximum average rated power with case temperature held to 100°C using conductive heat sink. **10 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA59
3 - 40	0.70

Maximum VSWR:

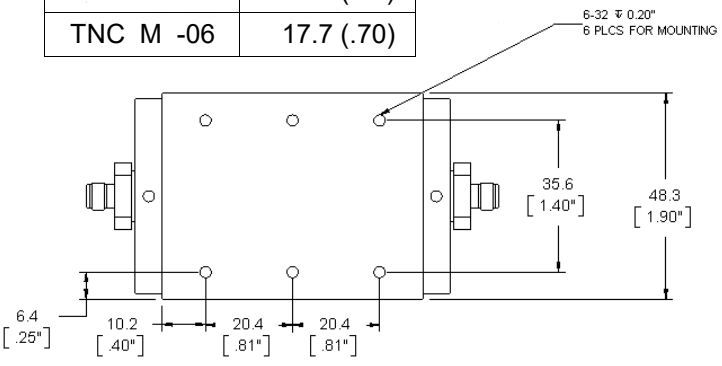
Frequency (GHz)	VSWR
	WA59
DC - 3.0	1.20

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.14 (4.9)
Height: 22.9 (0.90)
Width: 48.3 (1.90)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

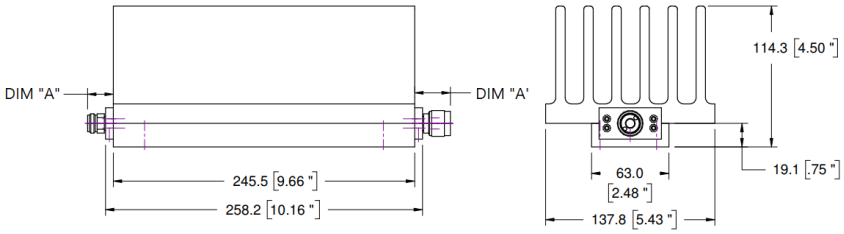


Fixed Coaxial Attenuator

WA60

DC – 5.0 GHz

500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 5.0 GHz

Nominal dB Values: 10 – 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, derated linearly to 25 W at 125°C. **5 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA60
10 - 30	0.75
31 - 40	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA60
DC - 2.5	1.15
2.5 - 5.0	1.35

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.57)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 4.1 (144.6)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

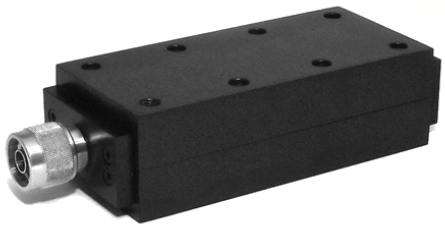
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

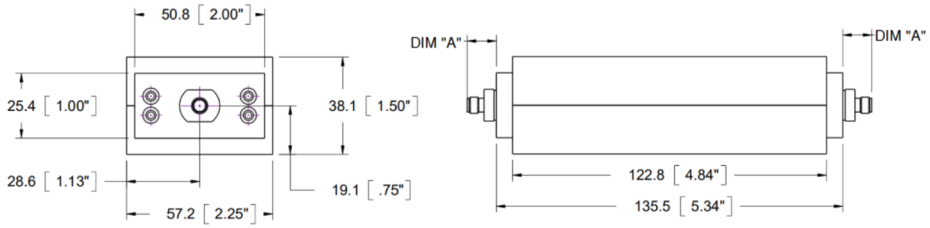
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Fixed Coaxial Attenuator WA61 & WA62

WA61: DC – 4 GHz
WA62: DC – 8.5 GHz

150 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. *Flat body with 6-32 mounting holes for conductive cooling.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA61: DC - 4 GHz.
WA62: DC - 8.5 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0006 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum rated average power with case temperature held to +100° C using conductive heat sink. **5 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB		
	WA61	WA62 (0 - 4 GHz)	WA62 (4 - 8.5 GHz)
3 - 30	0.40	0.40	0.75
40	0.50	0.50	1.00

Maximum VSWR:

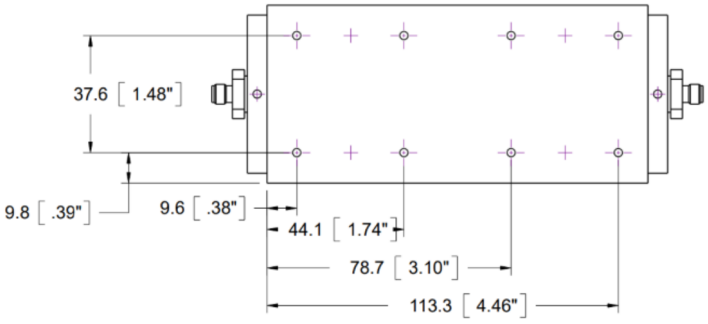
Frequency (GHz)	VSWR	
	WA61	WA62
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.35

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.57)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 0.8 (28.2)
Height: 38.1 (1.5)
Width: 57.2 (2.25)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be avail-



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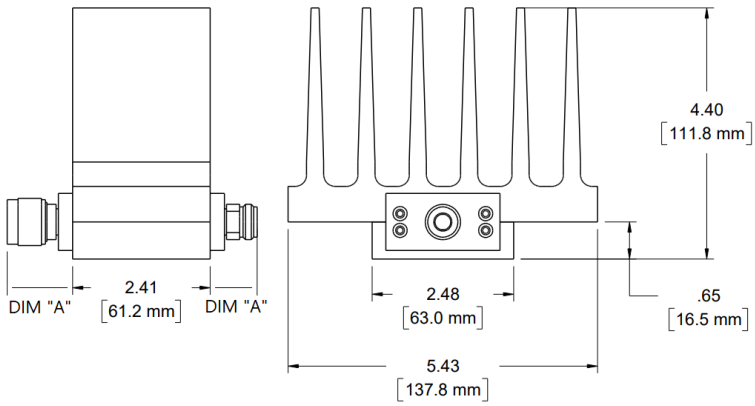
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

Fixed Coaxial Attenuator WA65

DC – 3.0 GHz 150 WATTS



Features

Type N, DIN 7/16, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 3.0 GHz

Nominal dB Values: 3 - 30 dB

Power Coefficient: < 0.0003 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average power to +25°C ambient terperature, de-rated linearly to 15 W at +125°C. **10 kW** peak (5 µsec pulse width; 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA65
3 - 30	1.00

Maximum VSWR:

Frequency (GHz)	VSWR
	WA65
DC - 3.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	14.4 (.57)
DIN 7/16 M -08	17.7 (.70)

Weight: 0.86 (30.3)
Height: 111.8 (4.40)
Width: 137.8 (5.43)

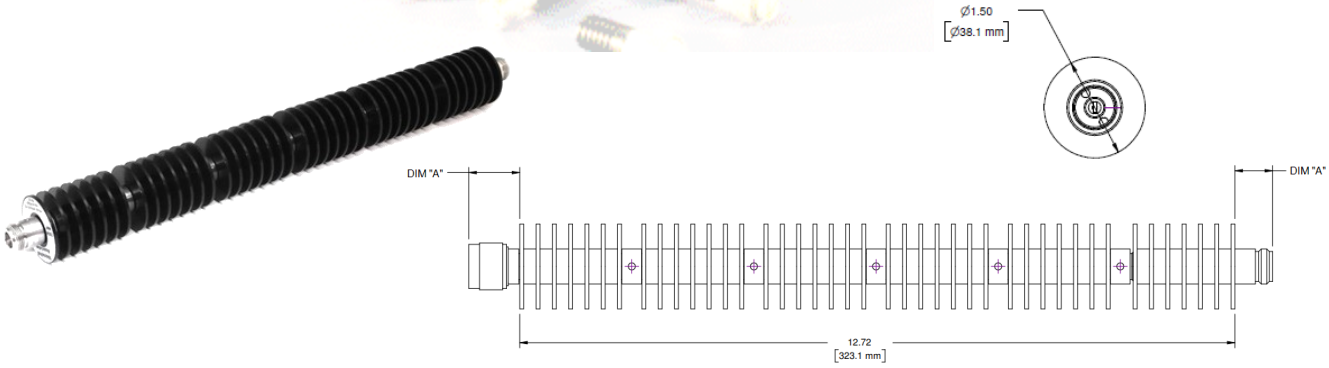
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA66

WA66/12: DC - 12.4 GHz
WA66: DC - 18.0 GHz

150 WATTS



Features

Type N or SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA66/12: DC to 12.4 GHz
WA66: DC to 18 GHz

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.00015 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum average power to +25°C ambient terperature, de-rated linearly to 15 W at +125°C. **1 kW** peak (5 µsec pulse width; 5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA66/12	WA66
10	1.50	2.0
20 - 40	1.20	1.50

Maximum VSWR

Frequency (GHz)	VSWR			
	WA66/12 10 Db	WA66/12 20-40 dB	WA66 10 dB	WA66 20-40 dB
DC - 12.4	1.90	1.50	1.90	1.50
12.4 - 18	N/A	N/A	1.90	1.50

Dimensions:

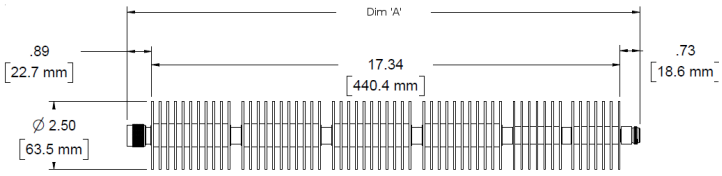
Connector Type (- code)	Length Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)

Weight: 0.51 (18.0)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA67

WA67: DC – 12 GHz 350 WATTS



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 12 GHz

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **350 W** maximum average power to +25°C ambient terperature, de-rated linearly to 10 W at +100°C (Case temperature must be held to 100°C maximum). **5 kW** peak (5 µsec pulse width; 3.5% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 8 GHz	8 to 12 GHz
10	2.0	+6.0/-0.0
20, 30	2.5	5.0/-0.0
40	2.5	6.0/-1.0

Maximum VSWR

Frequency (GHz)	VSWR
	WA67
DC - 8.0	1.30
8.0 - 12	1.60

Dimensions:

Attenuation (dB)	WA67	
	Length (Dim "A")	Weight
10	427 (16.79)	1.15 (40.5)
20, 30, 40	482 (18.96)	1.30 (45.6)

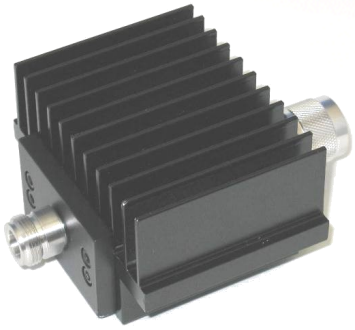
Diameter: 64.77 (2.55)

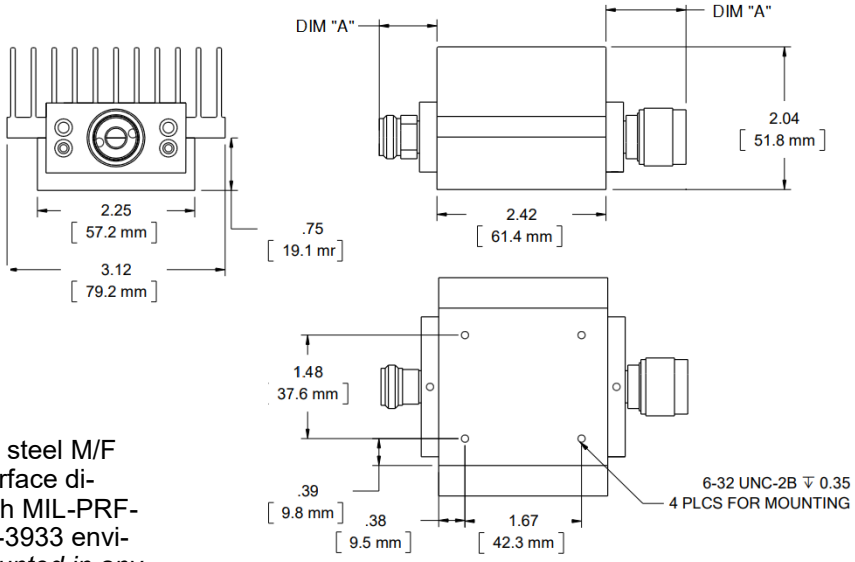
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Options: Stands.

Fixed Coaxial Attenuator WA68

WA68: DC – 6.0 GHz 100 WATTS





Features

Type N, DIN 7/16, or SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. *Can be mounted in any position utilizing the 6-32 holes provided on the bottom of the unit.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 6.0 GHz

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.0005 dB/dB/W; Bidirectional in power.

Power Rating: **100 W** maximum average power to +25°C ambient terperature, de-rated linearly to 10 W at +125°C. **5 kW** peak (5 µsec pulse width; 1% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA68
1 - 2	1.20
3 - 30	1.25

Maximum VSWR: 1.30

Dimensions:

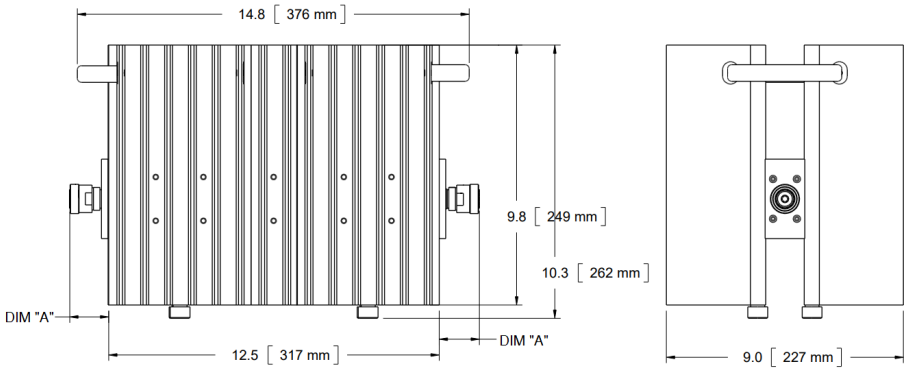
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 0.55 (19.2)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA70

DC – 2.5 GHz (*Usable to 3 GHz*) 1000 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. DIN 7/16 connector, conforms to DIN 47223, IEC 169-4, VG 95250, CECC 22190.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 2.5 GHz (Usable to 3.0 GHz)

Nominal dB Values: 20, 30, 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **1000 W** maximum average power to +25°C ambient terperature, de-rated linearly to 100 W at +125°C. **10 kW** peak (5 µsec pulse width; 5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation Accuracy: +/- 1.5 dB

Maximum VSWR: 1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

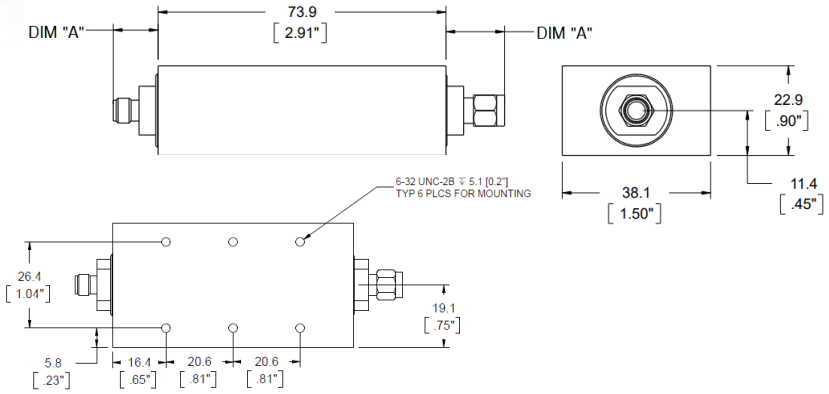
Weight: 18.2 (19.2)
Height: 249 (9.8)
Width: 227 (9.0)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA71 & WA72

WA71: DC – 4 GHz
WA72: DC – 8.5 GHz

50 WATTS



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Flat body with 6-32 mounting holes for conductive cooling.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA71: DC - 4 GHz.
WA72: DC - 8.5 GHz.

Nominal dB Values: 1 - 40 dB
(50 dB available in a unidirectional variant)

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **50 W** maximum rated average power with case temperature held to +100°C using conductive heat sink. **5 kW** peak power (5 µsec pulse width, .5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB		
	WA61	WA72 (0 - 4 GHz)	WA72 (4 - 8.5 GHz)
1 - 40	0.40	0.40	0.75

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA71	WA72
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: .14 (4.94)
Height: 22.9 (0.90)
Width: 38.1 (1.50)

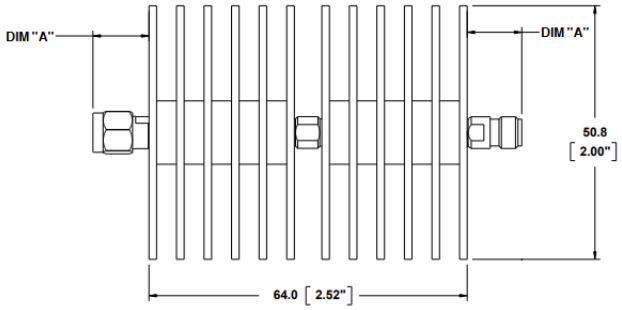
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA73

DC – 26 GHz

50 WATTS



Features

3.5 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 26 GHz.

Nominal dB Values: 6 – 40 dB

Power Coefficient: < 0.0015 dB/dB/W; Unidirectional in power.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C. **500 W** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA73
6, 10	1.25
20, 30	1.50
40	1.75

Maximum VSWR:

Frequency (GHz)	VSWR
	WA73
DC - 18	1.30
18 - 26.5	1.45

Dimensions:

Weight: 0.2 (7.1)
Diameter: 50.8 (2.0)

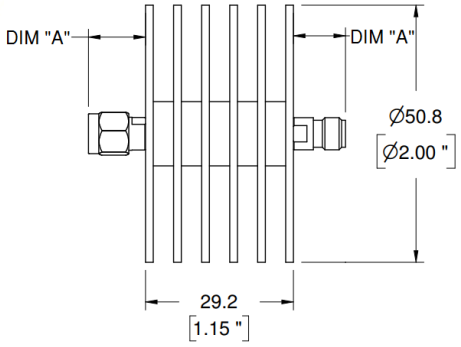
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA74

DC – 28 GHz

25 WATTS



Features

3.5 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 28 GHz.

Nominal dB Values: 3 - 30 dB

Power Coefficient: < 0.0006 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **500 W** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA74
3	0.70
6 - 10	1.0
20 - 30	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA74
DC - 18	1.30
18 - 28	1.35

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
3.5mm F -11	10.7 (.42)
3.5mm M -12	11.6 (.46)

Weight: 0.1 (3.5)
Diameter: 50.8 (2.0)

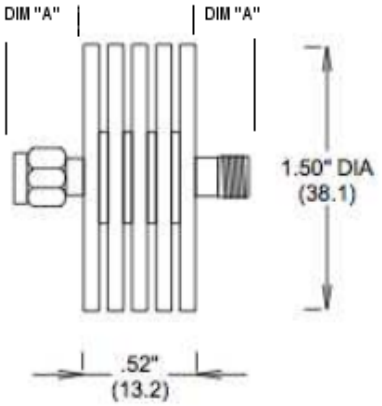
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA75

DC – 40 GHz

5 WATTS



Features

Precision 2.92 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40.0 GHz.

Nominal dB Values: 1 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 18 GHz	18 to 40 GHz
3	0.5	0.8
6, 10, 20, 30	1.0	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA75
DC - 18	1.20
18 - 40	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Weight: .06 (2.12)
Diameter: 38.1 (1.5)

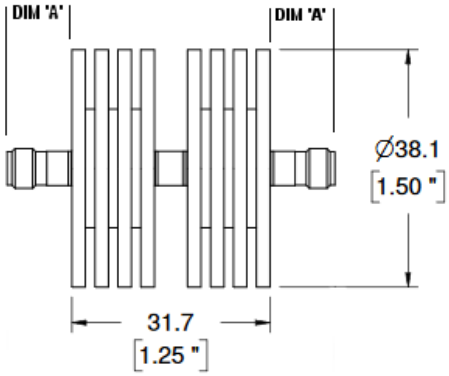
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA76

DC – 40 GHz

10 WATTS



Features

Precision 2.92 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40.0 GHz.

Nominal dB Values: 6 - 30 dB
(6 dB unit is bidirectional)

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 18 GHz	18 to 40 GHz
6 - 30	1.0	1.75

Maximum VSWR:

Frequency (GHz)	VSWR
	WA76
DC - 18	1.25
18 - 40	1.40

Dimensions:

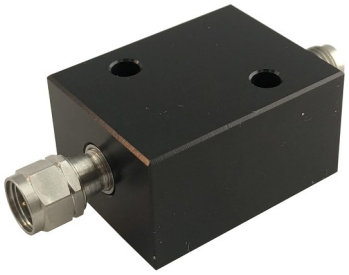
Connector Type (- code)	Length
	Dimension 'A'
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

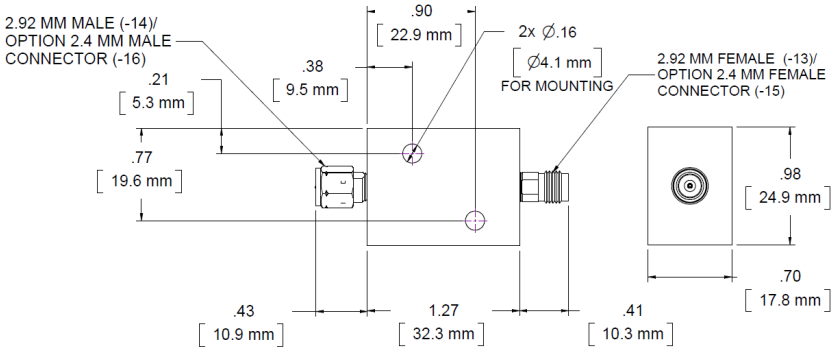
Weight: .145 (5.11)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA76B

DC – 40 GHz 10 WATTS





Features

Precision 2.92 mm stainless steel M/F connectors per IEEE P287, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements. Mountable design for convection cooling.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40.0 GHz.

Nominal dB Values: 3 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **10 W** maximum average rated power with case held to a maximum of +90°C. **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +90°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 18 GHz	18 to 40 GHz
3 - 30	1.0	1.75

Maximum VSWR:

Frequency (GHz)	VSWR
	WA76
DC - 18	1.25
18 - 40	1.40

Dimensions:

Weight: 45.9 (1.62)
Height: 24.9 (0.98)
Width: 17.8 (0.70)
Length: 53.6 (2.11)
Mounting: 2x 4.1 (0.16) thru holes.

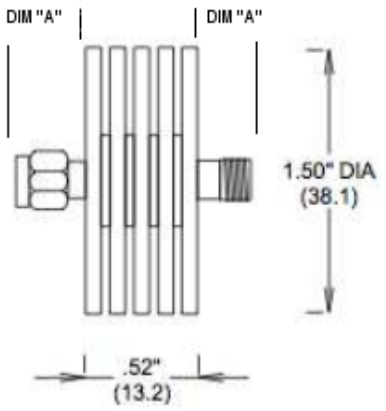
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA77

DC – 32 GHz

5 WATTS



Features

3.5 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 32.0 GHz.

Nominal dB Values: 0 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 26.5 GHz	26.5 to 32 GHz
1, 2	0.60	0.80
3, 6	0.50	0.80
10	0.60	0.80
11 - 30	0.75	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA77
DC - 26.5	1.25
26.5 - 32	1.35

Dimensions:

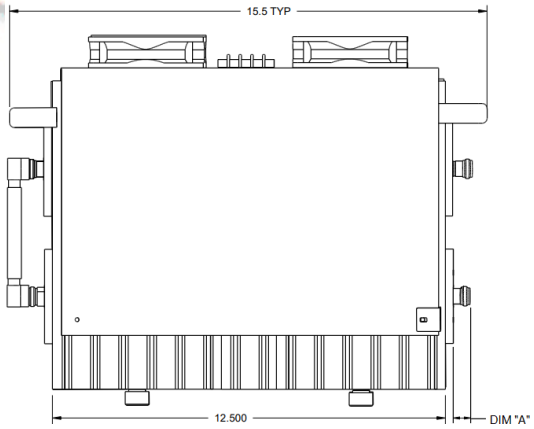
Connector Type (- code)	Length
	Dimension 'A'
3.5mm F -11	10.6 (.42)
3.5mm M -12	11.5 (.45)

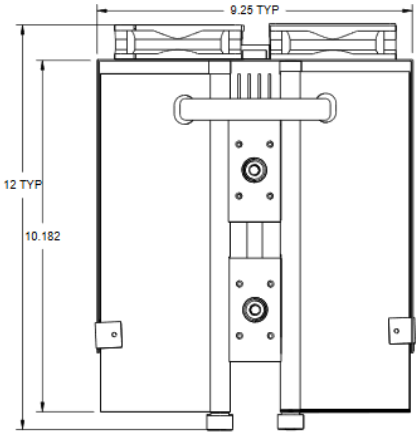
Weight: .06 (2.12)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA80

DC – 2.5 GHz (*Usable to 3 GHz*) 2000 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. DIN 7/16 connector, conforms to DIN 47223, IEC 169-4, VG 95250, CECC 22190. Forced air cooling.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 2.5 GHz (Usable to 3.0 GHz)

Nominal dB Values: 20, 30, 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **2000 W** maximum average power to +25°C ambient terperature, de-rated linearly to 100 W at +125°C. **10 kW** peak (5 µsec pulse width; 10% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Attenuation Accuracy: +/- 2.5 dB

Maximum VSWR: 1.35

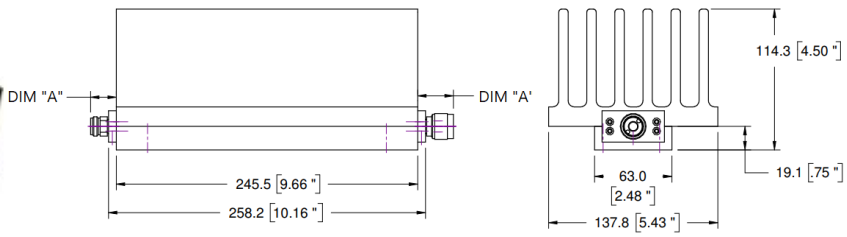
Dimensions:

Height:	295.0 (11.61)
Width:	234.0 (9.21)
Length:	394.0 (15.5)
Weight:	20.55 (724.8)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA81

DC – 10.0 GHz 500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 10.0 GHz

Nominal dB Values: 10 – 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, derated linearly to 25 W at 125°C. **5 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC - 7GHz	7 to 10 GHz
10,20,30, 40	2.0	+3.0/-0.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA81
DC - 4.0	1.25
4.0 - 8.0	1.45
8.0 - 10.0	1.70

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 4.1 (144.6)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

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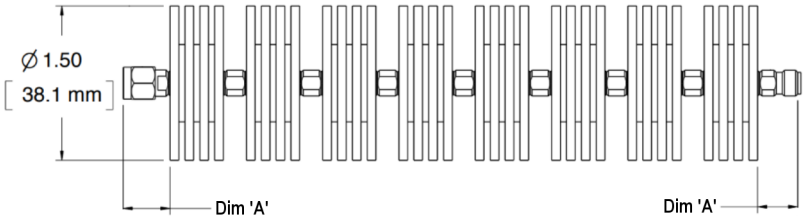
Fixed Coaxial Attenuator

WA88

DC – 40 GHz

50 WATTS



Features

Precision 2.92 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40.0 GHz.

Nominal dB Values: 20, 30, 40 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 100°C. **200 W** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 18 GHz	18 to 40 GHz
20, 30, 40	2.5	3.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA88
DC - 18.0	1.30
18.0 - 40.0	1.60

Dimensions:

Connector Type (- code)	Length Dimension 'A'
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Weight: 0.26 (9.17)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

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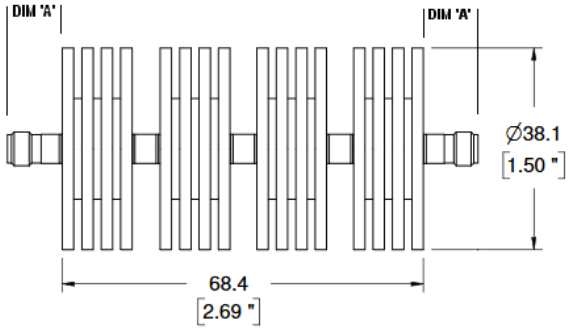
Fixed Coaxial Attenuator

WA89

DC – 40 GHz

20 WATTS



Features

Precision 2.92 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact construction meets a wide range of design requirements.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40.0 GHz.

Nominal dB Values: 10 - 30 dB

Power Coefficient: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	DC to 18 GHz	18 to 40 GHz
10 - 30	1.25	+2.5/-0.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA88
DC - 18.0	1.25
18.0 - 40.0	1.40

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Weight: 0.2 (7.1)
Diameter: 38.1 (1.5)

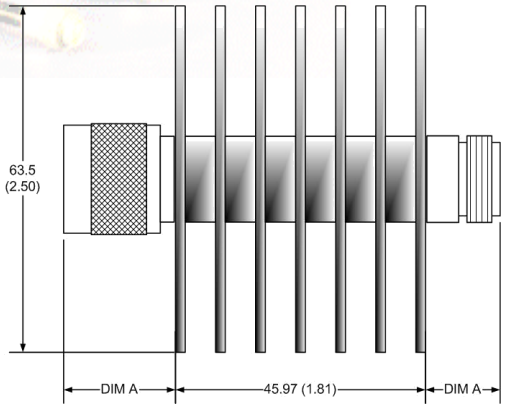
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator

WA90

WA90/12: DC – 12.4 GHz
WA90: DC – 18.0 GHz

50 WATTS



Features

Type N, TNC or SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA90/12: DC - 12.4 GHz.
WA90: DC - 18.0 GHz.

Nominal dB Values: 3 - 40 dB
(WA90/12 available in 50 and 60 dB variants)

Power Coefficient: < 0.0006 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** maximum rated average power at 25°C, de-rated linearly to 5 W at 125° C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA90/12	WA90
3	0.40	0.50
6	0.60	0.50
10	0.80	0.50
20	1.00	0.75
30	1.00	1.00
40 (50, 60)	2.00	1.00

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA90/12	WA90
DC - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.2 (7.1)
Diameter: 63.5 (2.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Addition-

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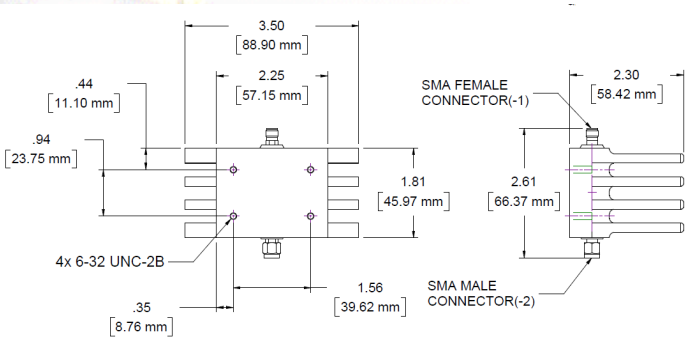
Fixed Coaxial Attenuator WA90B

WA90B: DC – 18.0 GHz 50 WATTS



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0006 dB/dB/W; Bidirectional in power.

Power Rating: **50 W** maximum rated average power at 25°C, de-rated linearly to 5 W at 125° C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA90B
3, 6, 10	0.50
20	0.75
30, 40	1.00

Maximum VSWR:

Frequency (GHz)	VSWR
	WA90B
DC - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Dimensions:

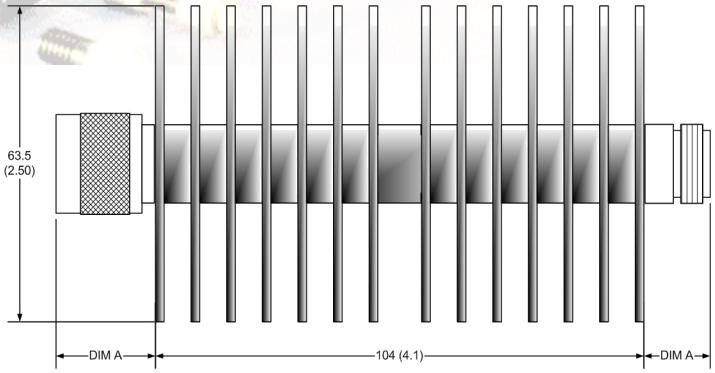
Connector Type (- code)	Length
	Dim 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: .41 (14.4)
Height: 58.5 (2.3)
Width: 89 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA91

WA91/12: DC – 12.4 GHz
WA91: DC – 18.0 GHz **100 WATTS**



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA91/12: DC - 12.4 GHz.
WA91: DC - 18.0 GHz.

Nominal dB Values: 3 - 40 dB

Power Coefficient: < 0.0005 dB/dB/W; Unidirectional in power. (3 and 6 dB units are bidirectional)

Power Rating: **100 W** maximum rated average power at 25°C, de-rated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA91/12	WA91
3, 6	1.00	1.00
10	0.75	0.75
20	1.00	1.00
30, 40	1.20	1.20

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA90/12	WA90	WA90 at 3 or 6 dB
DC - 8.0	1.20	1.20	1.20
8.0 - 12.4	1.25	1.25	1.25
12.4 - 18.0	N/A	1.35	1.45

Dimensions:

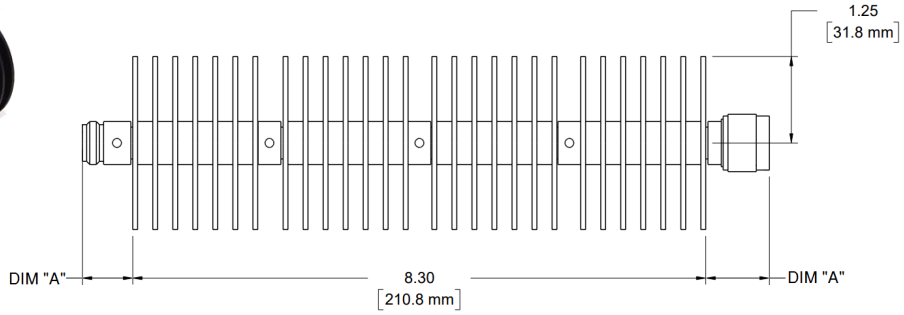
Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.35 (12.3)
Diameter: 63.5 (2.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA92

WA92/12: DC – 12.4 GHz
WA92: DC – 18.0 GHz **150 WATTS**



Features

Type N, SMA, or TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA92/12: DC - 12.4 GHz.
WA92: DC - 18.0 GHz.

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.0002 dB/dB/W; Unidirectional in power.

Power Rating: **150 W** maximum rated average power at 25°C, de-rated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 7.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB	
	WA92/12	WA92
10	2.00	2.00
20, 30, 40	1.50	1.50
LIM	3.00	3.00

Maximum VSWR:

Frequency (GHz)	VSWR			
	WA90/12 (10 dB)	WA92/12 (20 - 40 Db)	WA92 (10dB)	WA92 (20 - 40 dB)
DC - 12.4	1.60	1.50	1.60	1.50
12.4 - 18.0	N/A	N/A	1.60	1.50
LIM	1.50	1.50	1.50	1.50

Dimensions:

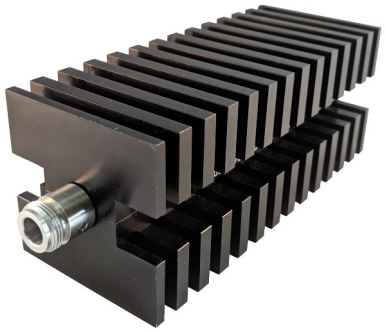
Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

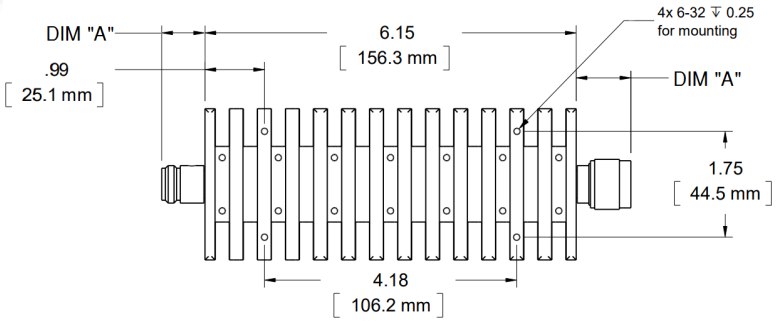
Weight: 0.35 (12.3)
Diameter: 63.5 (2.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA93

DC – 18.0 GHz 100 WATTS





Features

SMA, Type N, and TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz

Nominal dB Values: 10 - 30 dB

Power Sensitivity: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **100 W** maximum rated average power at 25°C, de-rated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0006 dB/dB/°C.

Construction: Black finned aluminum alloy body with passivated stainless steel connectors and gold plated beryllium copper contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
	WA93
10	1.50
20 - 30	1.40

Maximum VSWR:

Frequency (GHz)	VSWR
	WA93
DC - 8.0	1.25
8.0 - 12.4	1.30
12.4 - 18.0	1.40

Dimensions:

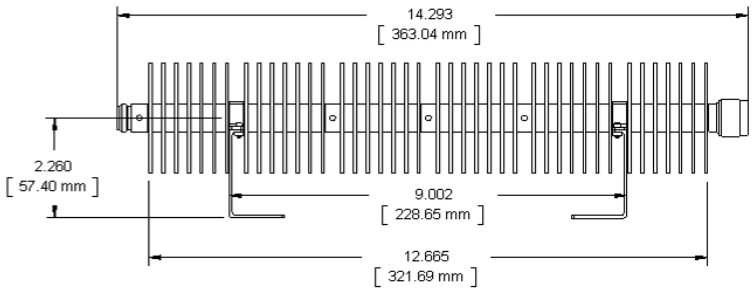
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Height: 63.5 (2.50)
Width: 63.5 (2.50)
Weight: 1.5 (52.9)
Mounting: 4x 6-32 thru

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Fixed Coaxial Attenuator WA95

WA95/12: DC – 12.4 GHz
WA95: DC – 18.0 GHz **200 WATTS**



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA95/12: DC - 12.4 GHz.
WA95: DC - 18.0 GHz.

Nominal dB Values: 10 - 40 dB

Power Coefficient: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: **200 W** maximum rated average power at 25°C, de-rated linearly to 20 W at 100°C. **1 kW** peak power (5 µsec pulse width, 3.5% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy (dB)	
	WA95/12	WA95
10 - 40	+2.0/-1.50	+3.0/-2.0

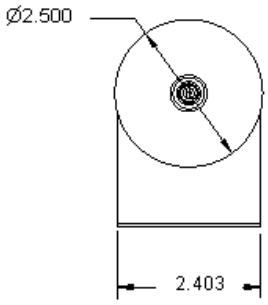
Maximum VSWR: 1.50

Dimensions:

Diameter:	63.5 (2.50)
Length:	363.04 (14.29)
Weight:	1.01 (35.82)

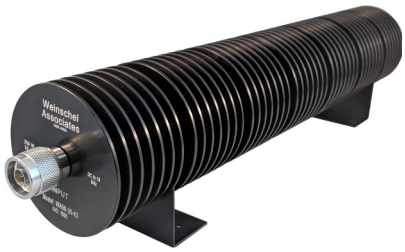
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

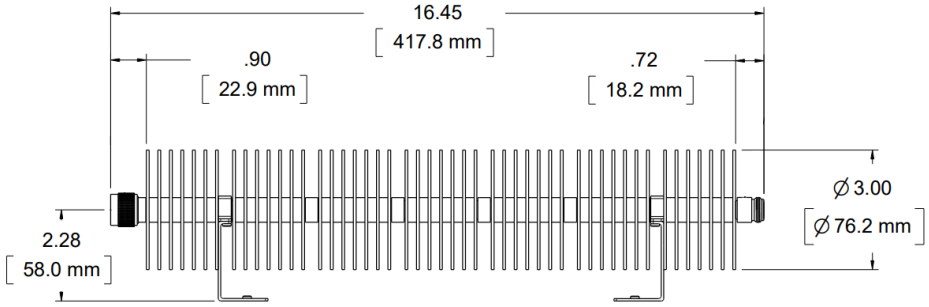
Options: Stands for mounting (pictured above).



Fixed Coaxial Attenuator WA96

DC – 18.0 GHz 250 WATTS





Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Mounting stands included.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz

Nominal dB Values: 10 - 40 dB

Power Sensitivity: < 0.0001 dB/dB/W; Unidirectional in power.

Power Rating: 250 W maximum rated average power at 25°C, de-rated linearly to 20 W at 125°C. **1 kW** peak power (5 µsec pulse width, 3.5% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors and gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy (dB) WA96
10 - 40	+4.0/-2.5

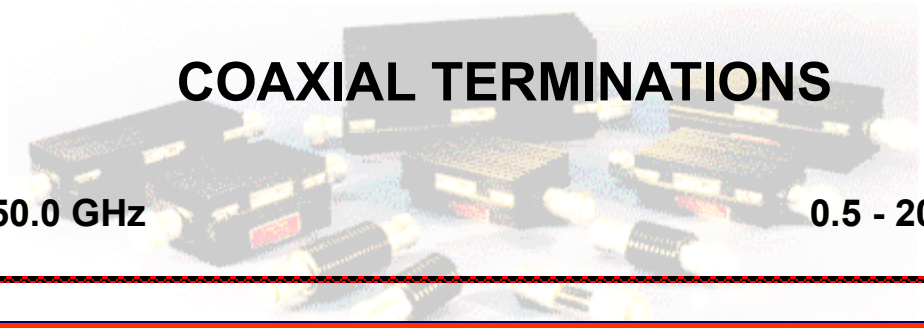
Maximum VSWR: 1.60

Dimensions:

Height:	96.1 (3.78)
Diameter:	76.2 (3.00)
Length:	417.8 (16.45)
Weight:	1.59 (56)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

COAXIAL TERMINATIONS



DC – 50.0 GHz **0.5 - 2000 WATTS**

Low Power Coaxial Terminations: 1 Watt to 10 Watts					
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Power (kW)**	**Connectors and Mounting Notes**	**Page No.**
WA1405	0.5	50	0.25	2.4 mm	84
WA1401/3	1	3	0.25	SMA	82
WA1401/6	1	6	0.25	SMA	82
WA1401/12	1	12.4	0.25	SMA	82
WA1401/18	1	18	0.25	SMA	82
WA1401/26	1	26.5	0.25	SMA	82
WA1402	1	40	0.5	2.92 mm	83
WA1455/6	2	6	1	N, TNC	122
WA1418	2	6	0.50	BNC	87
WA1406	2	12.4	0.50	SMA	85
WA1455/12	2	12.4	1	N, TNC	122
WA1408	2	18	0.5	SMA	85
WA1455	2	18	1	N, TNC	122
WA1409	2	26.5	0.50	SMA	86
WA1456	2	32.0	0.2	3.5 mm	123
WA1454	2	40	0.2	2.92 mm	121
WA1424/6	5	6	1	N, TNC	94
WA1443/6	5	6	1	SMA	111
WA1424/12	5	12.4	1	N, TNC	94
WA1443/12	5	12.4	1	SMA	111
WA1424	5	18	1	N, TNC	94
WA1443	5	18	1	SMA	111
WA1475	5	40	0.20	2.92 mm	133
WA1419/6	10	6	1	SMA	88
WA1425/6	10	6	1	N, TNC	95
WA1420	10	6	1	BNC	89
WA1419/12	10	12.4	1	SMA	88
WA1425/12	10	12.4	1	N, TNC	95
WA1419	10	18	1	SMA	88
WA1425	10	18	1	N, TNC	95
WA1476	10	40	0.20	2.92 mm	134
WA1489	20	40	0.20	2.92 mm	138

* Other configurations are available

Custom solutions at "off-the-shelf" prices

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COAXIAL TERMINATIONS

DC – 50.0 GHz **0.5 - 2000 WATTS**

Medium Power Coaxial Terminations: 20 Watts to 100 Watts					
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Power (kW)**	**Connectors and Mounting Notes**	**Page No.**
WA1434L	20	4	5	N, SMA, TNC, 7/16 DIN	106
WA1421/4	25	4	5	N, SMA, TNC, Low-Profile Mountable	90
WA1421	25	8.5	5	N, SMA, TNC, Low-Profile Mountable	90
WA1434	25	4	5	N, SMA, TNC, 7/16 DIN	104
WA1434B	25	4	5	N, SMA, TNC, Square Body Mountable	105
WA1452	25	4	5	N, SMA, TNC, 7/16 DIN	119
WA1433	25	8.5	5	N, SMA, TNC, 7/16 DIN	104
WA1433B	25	8.5	5	N, SMA, TNC, Square Body Mountable	105
WA1427	25	10	1	N, SMA, TNC	98
WA1446	25	18	1	N, SMA, TNC	114
WA1444	25	26.5	0.50	3.5 mm, 2.92 mm	112
WA1423	50	4	5	N, SMA, TNC, 7/16 DIN	92
WA1423B	50	4	5	N, SMA, TNC, Square Body Mount	93
WA1471	50	4	5	N, SMA, TNC, Low-Profile Mountable	131
WA1426	50	8.5	5	N, SMA, TNC	96
WA1426B	50	8.5	5	N, SMA, TNC Square Body Mount	97
WA1472	50	8.5	5	N, SMA, TNC, Low-Profile Mountable	131
WA1447	50	18	1	N, SMA	115
WA1490	50	18	1	N, SMA, TNC	139
WA1490B	50	18	1	N, SMA, TNC, Mountable	140
WA1473	50	28	0.5	3.5 mm	132
WA1488	50	40	0.2	2.92 mm	137
WA1422	75	4	5	N, SMA, TNC, 7/16 DIN	91
WA1429	75	8.5	5	N, SMA, TNC, 7/16 DIN	100
WA1459	100	3	10	N, SMA, TNC, Low-Profile Mountable	126
WA1430	100	4	5	N, SMA, TNC, 7/16 DIN	101
WA1432	100	4	5	N, SMA, TNC, 7/16 DIN	104
WA1431	100	8.5	5	N, SMA, TNC, 7/16 DIN	102
WA1448	100	18	1	N, SMA, TNC	116
WA1491	100	18	1	N, SMA, TNC	141

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COAXIAL TERMINATIONS

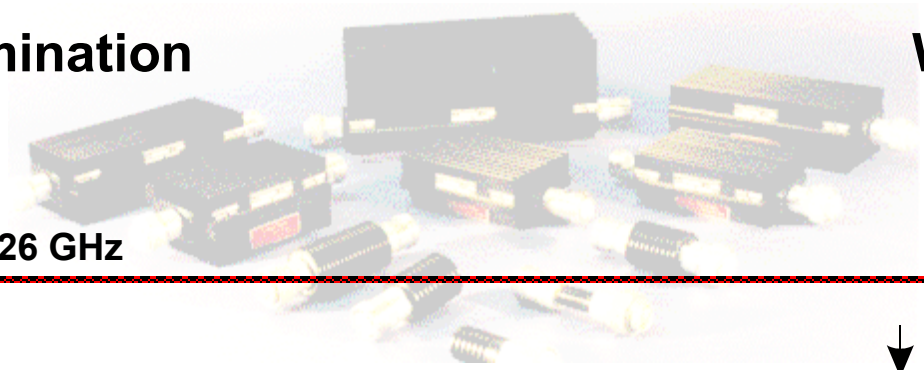
DC – 50.0 GHz **0.5 - 2000 WATTS**

High Power Coaxial Terminations: 150 Watts to 2000 Watts					
Model Number	**Average Power (W)**	**Frequency Range DC - (GHz)**	**Peak Pow-er (kW)**	**Connectors and Mounting Notes**	**Page No.**
WA1428	150	3	10	N, SMA, TNC, 7/16 DIN	98
WA1439	150	3	10	N, 7/16 DIN	110
WA1465	150	3	10	N, 7/16 DIN	128
WA1457	150	5	10	N, SMA, TNC, 7/16 DIN	124
WA1449	150	8.5	5	N, SMA, 7/16 DIN	117
WA1466	150	18	5	N, SMA, TNC	129
WA1495	200	18	1	N-type	142
WA1445	250	3	10	N, TNC, 7/16 DIN	113
WA1458	250	6	10	N, TNC, 7/16 DIN	125
WA1435	250	8.5	5	N, SMA, TNC, 7/16 DIN	107
WA1496	250	18	1	N, TNC	143
WA1438	300	5	5	N, 7/16 DIN	109
WA1436	300	8.5	5	N, 7/16 DIN	108
WA1453	500	3	10	N, 7/16 DIN	120
WA1460	500	5	10	N, 7/16 DIN	127
WA1451	500	8.5	5	N, 7/16 DIN	118
WA1481	500	10	5	N, 7/16 DIN	136
WA1470	1000	3	10	N, 7/16 DIN	130
WA1480	2000	3	10	N, 7/16 DIN	135

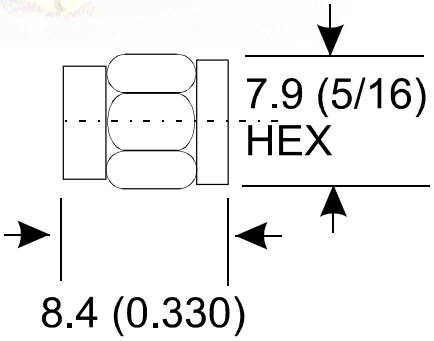
* Other configurations are available

Custom solutions at “off-the-shelf” prices

Termination WA1401



DC – 26 GHz 1 WATT



Features

Type SMA Male stainless steel connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. *Lightweight, subminiature design.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1401/3: DC to 3.0 GHz.
WA1401/6: DC to 6.0 GHz.
WA1401/12: DC to 12.4 GHz.
WA1401/18: DC to 18.0 GHz.
WA1401/20: DC to 20.0 GHz.
WA1401/26: DC to 26.5 GHz.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **250 W** peak power (5 µsec pulse width, 0.20% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Options: Chain

Maximum VSWR:

Frequency (GHz)	VSWR WA1401 (all variants)
DC - 4.0	1.05
4.0 - 8.0	1.10
8.0 - 12.4	1.15
12.4 - 18.0	1.20
18.0 - 26.5	1.35

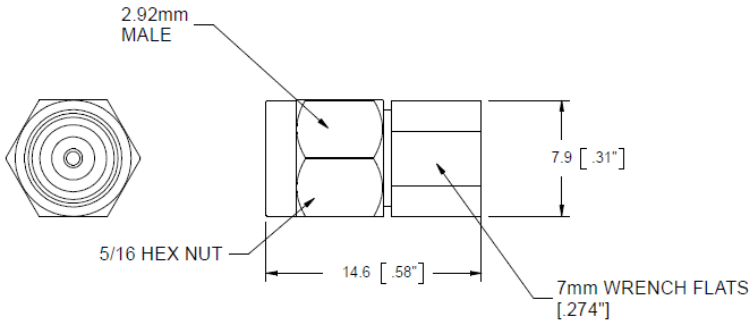
Dimensions:

Dimension	Connector Type	
	SMA (F), -01	SMA (M) -02
Length (Dim A)	12.4 (.49)	8.4 (.33)
Weight (nominal)	1.8 (.064)	2.1 (.074)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1402

DC – 40 GHz 1 WATT



Features

Precision 2.92 mm M (type k) stainless steel connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. High frequency design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 40 GHz

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **500 W** peak power (5 µsec pulse width, 0.10% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: <0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Options: Chain

Maximum VSWR:

Frequency (GHz)	VSWR WA1402
DC - 40.0	1.20

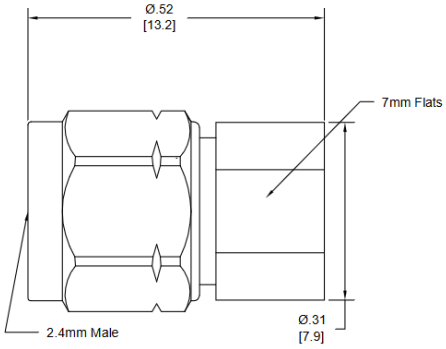
Dimensions:

Length: 14.5 (.57)
Weight: 3.83 (.135)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1405

DC – 50 GHz 0.5 WATT



Features

Precision 2.92 mm M (type k) stainless steel connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. High frequency design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 50 GHz

Power Rating: 0.5 W maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 100°C.

Temperature Range: -55°C to +100°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Options: Chain

Maximum VSWR:

Frequency (GHz)	VSWR WA1405
DC - 40.0	1.45

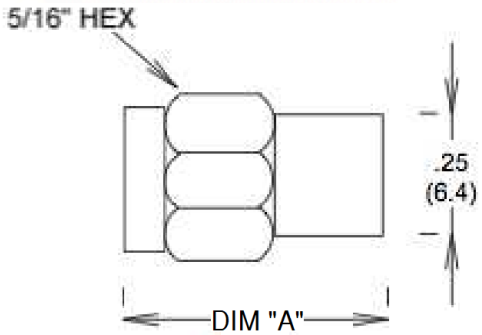
Dimensions:

Length: 13.2 (.52)
Weight: 3.5 (.12)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1406 & WA1408

WA1406: DC – 12.4 GHz
WA1408: DC – 18.0 GHz **2 WATTS**



Features

Type SMA stainless steel connector per MIL-STD -348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact, rugged design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1406: DC - 12.4 GHz.
WA1408: DC - 18.0 GHz.

Power Rating: 2 W maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **500 W** peak power (5 µsec pulse width, 0.20% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA1406	WA1408
DC - 4.0	1.15	1.15
4.0 - 8.0	1.20	1.20
8.0 - 12.4	1.25	1.25
12.4 - 18.0	N/A	1.25

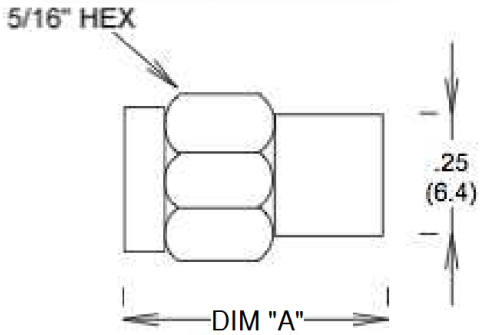
Dimensions:

Dimension	Connector Type	
	SMA (F), -1	SMA (M) -2
Length (Dim A)	12.4 (.49)	13.7 (0.52)
Weight (nominal)	1.9 (.067)	2.9 (0.10)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1409

DC – 26.5 GHz 2 WATT



Features

Type SMA stainless steel connector per MIL-STD -348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact, rugged design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 26.5 GHz

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **500 W** peak power (5 µsec pulse width, 0.20% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR WA1409
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 18	1.25
18 - 26.5	1.40

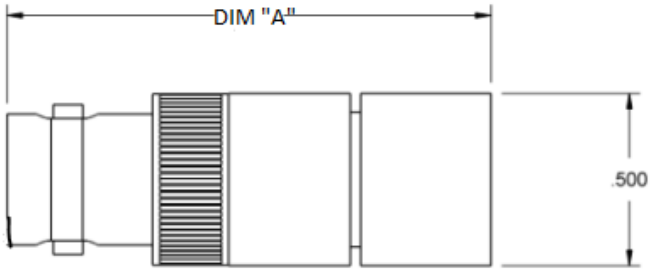
Dimensions:

Dimension	Connector Type	
	SMA (F), -1	SMA (M) -2
Length (Dim A)	12.4 (.49)	13.7 (0.52)
Weight (nominal)	1.9 (.067)	2.9 (0.10)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1418

DC – 6.0 GHz 2 WATT



Features

Type BNC stainless steel connector per MIL-STD -348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 6.0 GHz

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **500 W** peak power (5 µsec pulse width, 0.20% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body, nickel plated brass connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Option: Chain.

Maximum VSWR:

Frequency (GHz)	VSWR WA1418
DC - 4.0	1.25
4.0 - 6.0	1.30

Dimensions:

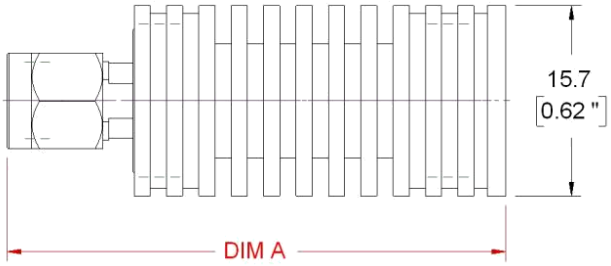
Dimension	Connector Type	
	BNC (F), -19	BNC (M) -20
Length (Dim A)	28.8 (1.33)	28.8 (1.33)
Weight (nominal)	24.9 (0.88)	25.2 (0.89)

Diameter: 12.7 (.50)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1419

WA1419/6: DC – 6.0 GHz
WA1419/12: DC – 12.4 GHz
WA1419: DC – 18.0 GHz **10 WATTS**



Features

Type SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1419: DC - 18.0 GHz.
WA1419/6: DC - 6.0 GHz.
WA1419/12: DC - 12.4 GHz.

Power Rating: **10 W** maximum rated average power at 25°C, de-rated linearly to 0.5 W at 125° C. **1 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Option: Chain.

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA1419	WA1419/6	WA1419/12
DC - 8.0	1.20	1.20	1.20
8.0 - 12.4	1.30	N/A	1.30
12.4 - 18.0	1.35	N/A	N/A

Dimensions and Weight (both models):

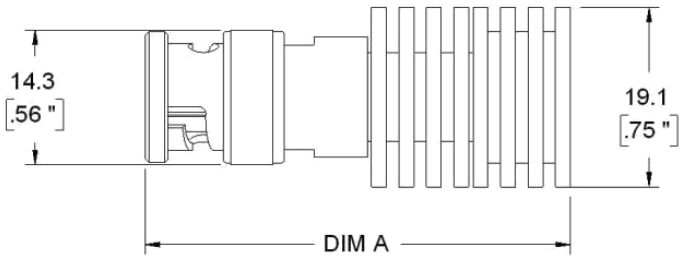
Dimension	Connector Type	
	SMA (F), -1	SMA (M) -20
Length (Dim A)	39.4 (1.55)	41.4 (1.63)
Weight (nominal)	9.9 (0.35)	9.9 (0.35)

Diameter: 15.7 (0.62)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1420

DC – 6.0 GHz 10 WATT



Features

Type BNC stainless steel connector per MIL-STD -348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 6.0 GHz

Power Rating: **10 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 W** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy and passivated stainless steel body, nickel plated brass connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: VSWR performed across frequency range.Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR WA1420
DC - 4.0	1.25
4.0 - 6.0	1.30

Dimensions and Weight:

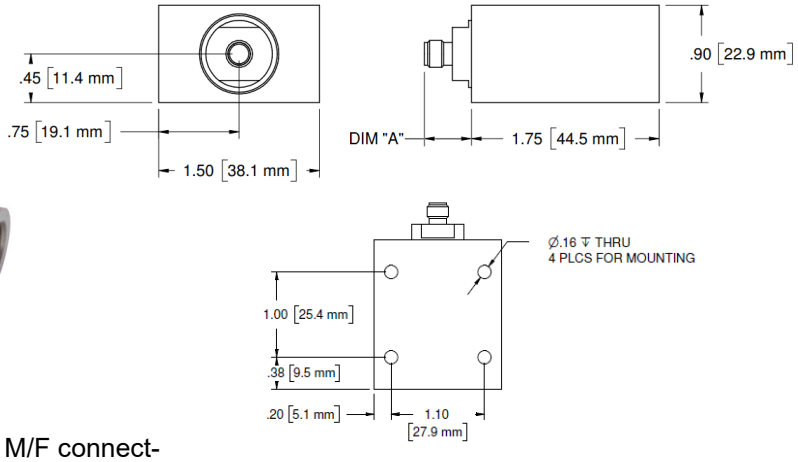
Dimension	Connector Type	
	BNC (F), -19	BNC (M) -20
Length (Dim A)	40.6 (1.6)	41.4 (1.63)
Weight (nominal)	.01 (.35)	.01 (.35)

Diameter: 19.1 (0.75)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1421

WA1421/4: DC – 4.0 GHz
WA1421: DC – 8.5 GHz **25 WATTS**



Features

SMA, N-type or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1421: DC - 8.5 GHz.
WA1421/4: DC - 4.0 GHz.

Power Rating: **25 W** maximum rated average power with case temperature held to +100°C using conductive heat sink. **5 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +100°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA1421	WA1421/4
DC - 4.0	1.20	1.20
4.0 - 8.5	1.30	N/A

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

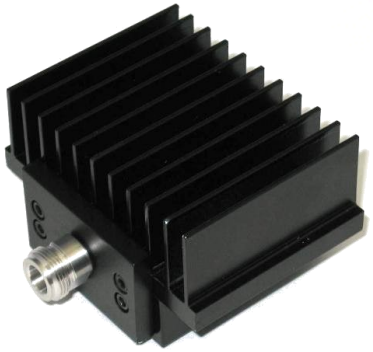
Weight: 0.17 (6.0)
Height: 22.90 (0.90)
Width: 38.1 (1.50)

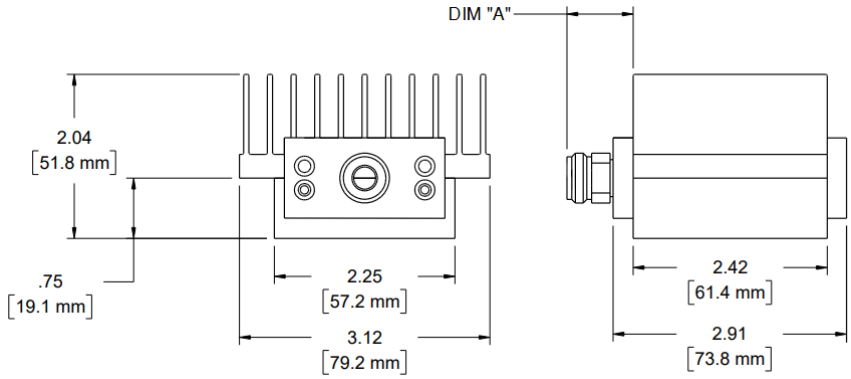
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1422

DC – 4.0 GHz 75 WATTS





Features

Type N, DIN 7/16, TNC or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1422
DC - 4.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

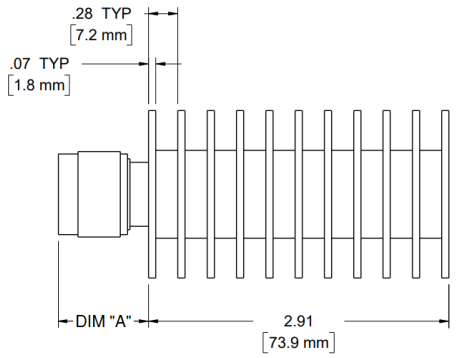
Weight: .55 (19.2)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1423

DC – 4.0 GHz 50 WATTS



Features

Type N, DIN 7/16, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1423
DC - 4.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

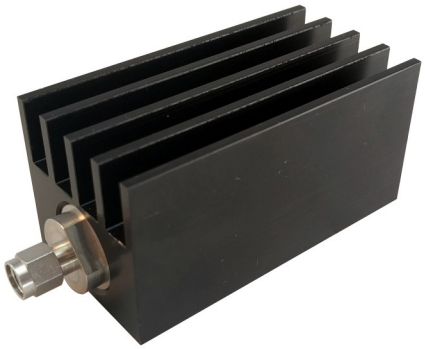
Weight: .28 (9.88)
Diameter: 38.1 (1.5)

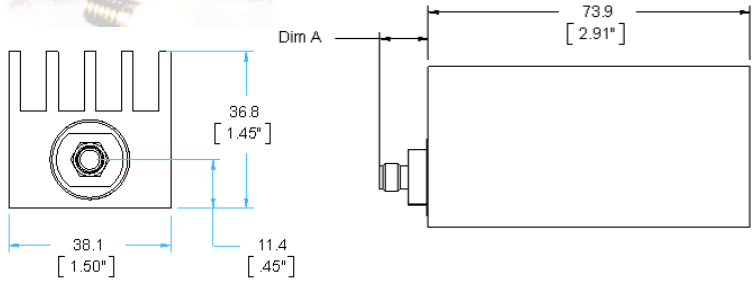
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

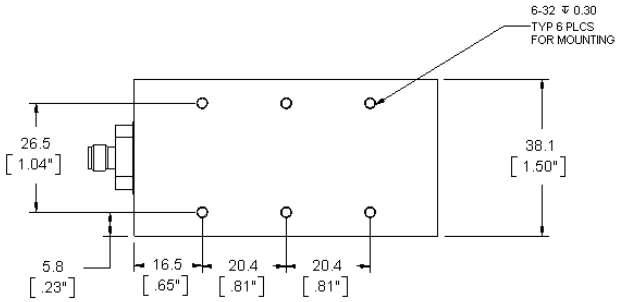
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1423B

DC – 4.0 GHz 50 WATTS







Features

Type N, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1423B
DC - 4.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

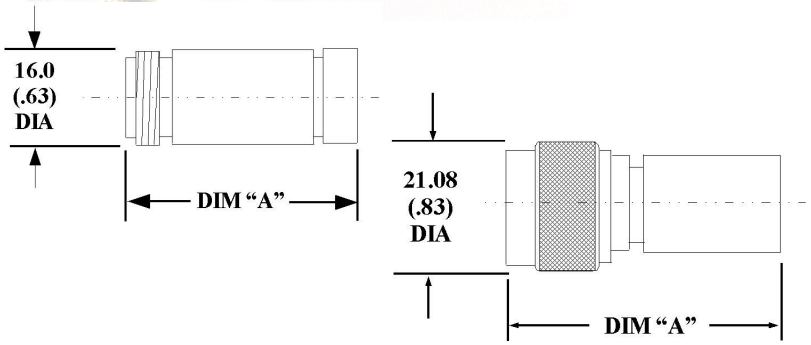
Weight: 0.28 (9.88)
Height: 37.08 (1.46)
Width: 38.1 (1.5)
Mounting: 6x 6-32, 0.3"

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1424

WA1424/6: DC – 6.0 GHz
WA1424/12: DC – 12.4 GHz
WA1424: DC – 18.0 GHz **5 WATTS**



Features

N-type or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1424: DC - 18.0 GHz
WA1424/6: DC - 6.0 GHz
WA1424/12: DC - 12.4 GHz

Power Rating: **5 W** maximum rated average power at 25°C, de-rated linearly to 0 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Maximum VSWR

Frequency (GHz)	VSWR		
	WA1424	WA1424/6	WA1424/12
DC - 2.0	1.03	1.03	1.03
2.0 - 4.0	1.05	1.05	1.05
4.0 - 8.0	1.15	1.15	1.15
8.0 - 12.4	1.30	N/A	1.30
12.4 - 18.0	1.35	N/A	N/A

Dimensions:

Dimension	Connector Type			
	N-Type (F) -03	N-Type (M) -04	TNC (F) -05	TNC (M) -06
Length (Dim A)	40 (1.57)	45 (1.77)	45 (1.77)	48 (1.89)
Weight (nominal)	.06 (2.12)	.06 (2.12)	.062 (2.20)	.062 (2.20)

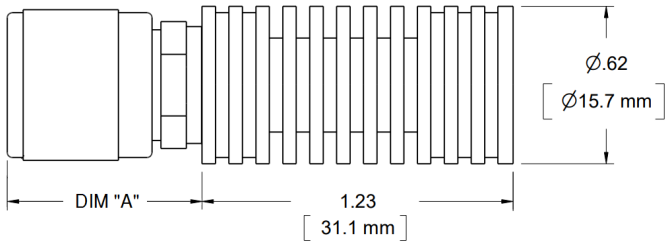
Body diameter: 16.0 (0.63)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

TEL: 877.948.8342 / 301.963.4630 ♦ Fax: 301.963.8640
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

Termination WA1425

WA1425/6: DC – 6.0 GHz
WA1425/12: DC – 12.4 GHz
WA1425: DC – 18.0 GHz **10 WATTS**



Features

Type N or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1424: DC - 18.0 GHz
WA1424/6: DC - 6.0 GHz
WA1424/12: DC - 12.4 GHz

Power Rating: **10 W** maximum rated average power at 25°C, de-rated linearly to 0.5 W at 125° C. **1 kW** peak power (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR

Frequency (GHz)	VSWR		
	WA1425	WA1425/6	WA1425/12
DC - 2.0	1.03	1.03	1.03
2.0 - 4.0	1.05	1.05	1.05
4.0 - 8.0	1.15	1.15	1.15
8.0 - 12.4	1.30	N/A	1.30
12.4 - 18.0	1.35	N/A	N/A

Dimensions:

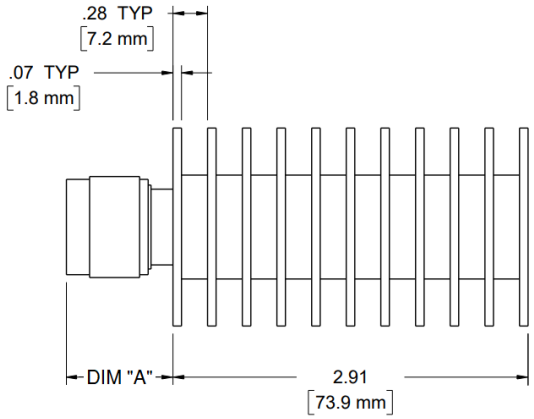
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.11 (3.88)
Body Diameter: 16.0 (0.63)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1426

DC – 8.5 GHz 50 WATTS



Features

Type N, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1426
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

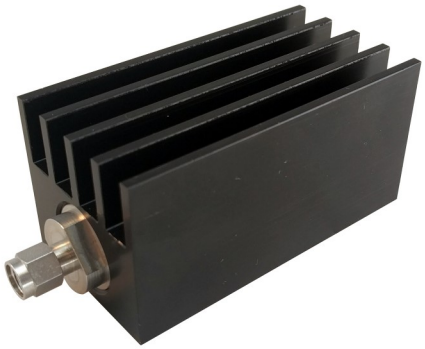
Weight: .28 (9.88)
Diameter: 38.1 (1.5)

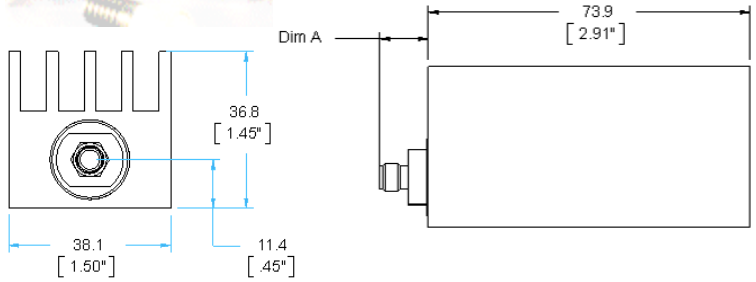
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

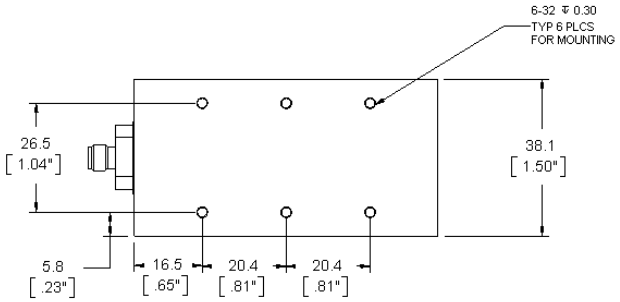
Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1426B

DC – 8.5 GHz 50 WATTS







Features

Type N, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1426B
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

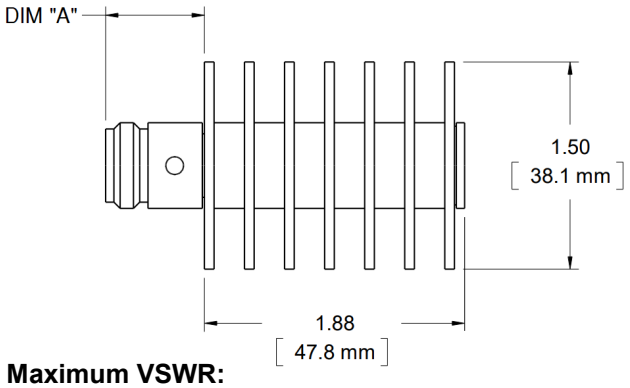
Weight: 0.28 (9.88)
Height: 37.08 (1.46)
Width: 38.1 (1.5)
Mounting: 6x 6-32, 0.3

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1427

DC – 10.0 GHz 25 WATTS



Features

Type N, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 10.0 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1427
DC - 4.0	1.10
4.0 - 10.0	1.15

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

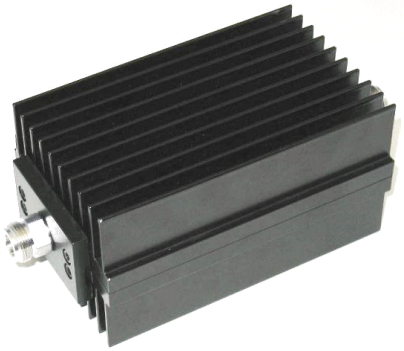
Weight: .28 (9.88)
Diameter: 38.1 (1.5)

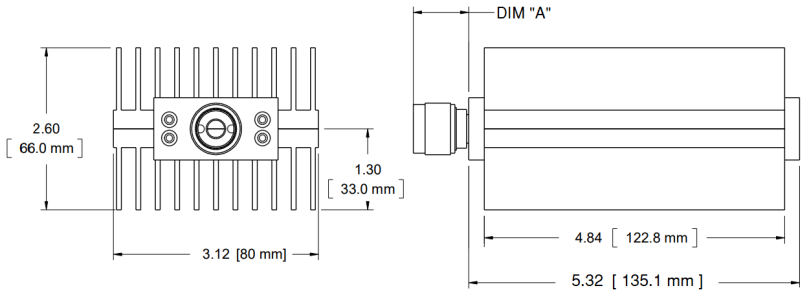
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1428

DC – 3.0 GHz 150 WATTS





Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **10 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1428
DC - 1.5	1.10
1.5 - 2.5	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

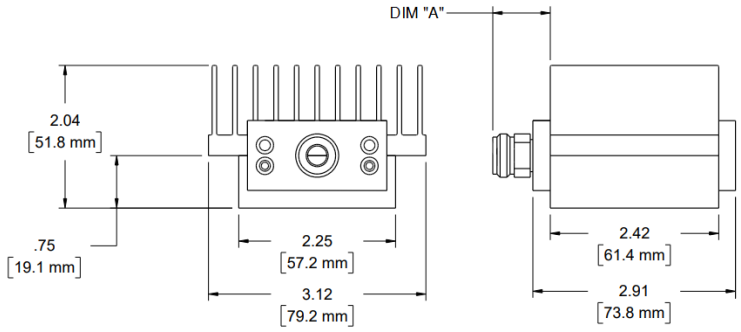
Weight: 1.13 (39.9)
Height: 66 (2.60)
Width: 80 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Termination WA1429

DC - 8.5 GHz 75 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **75 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 7.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

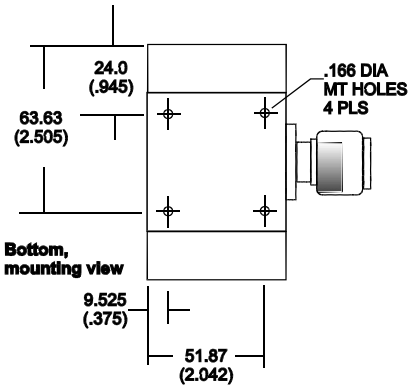
Frequency (GHz)	VSWR
	WA1429
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

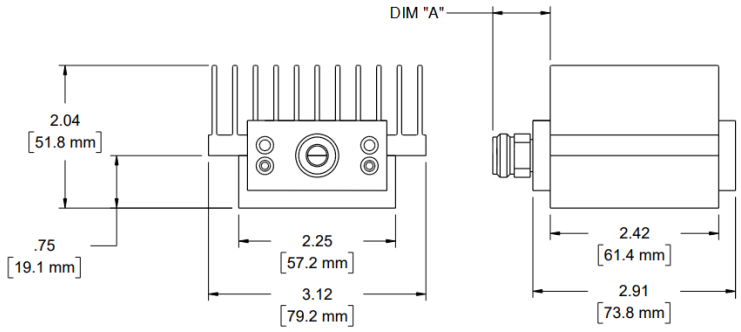
Weight: 0.5 (17.6)
Height: 51.8 1(2.04)
Width: 79.2 (3.12)
Mounting: 4x.166 diameter holes

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Termination WA1430

DC - 4.0 GHz 100 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 10 W at 125°C. **5 kW** peak power (5 µsec pulse width, 1.0% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

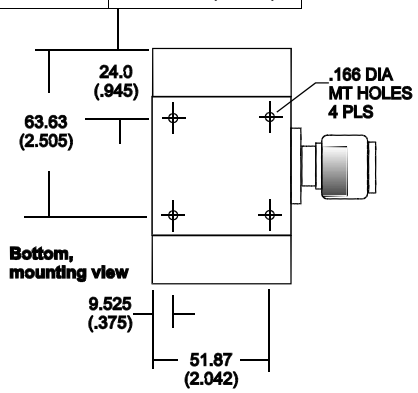
Frequency (GHz)	VSWR
	WA1430
DC - 4.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

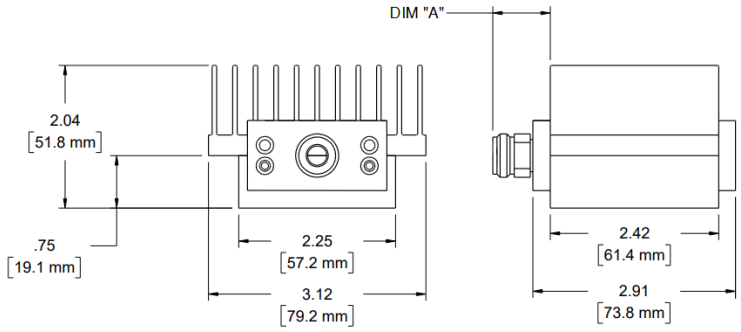
Weight: 0.5 (17.6)
Height: 51.8 (2.04)
Width: 79.2 (3.12)
Mounting: 4x.166 diameter holes

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Termination WA1431

DC - 8.5 GHz 100 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 10 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

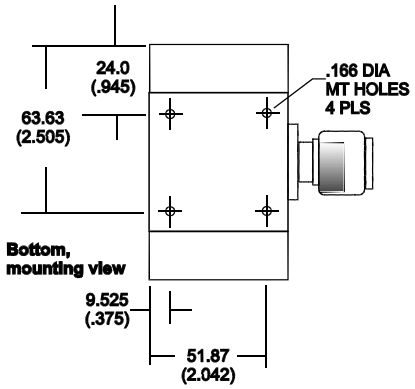
Frequency (GHz)	VSWR
	WA1431
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

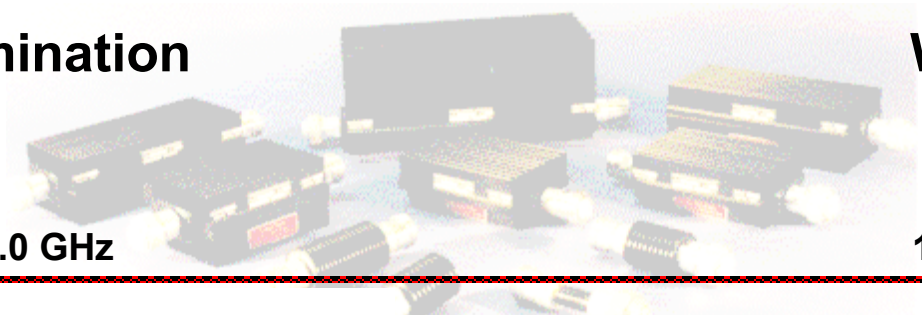
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.2)
7/16 DIN M -08	31.8 (1.25)

Weight: 0.5 (17.6)
Height: 51.8 (2.04)
Width: 79.2 (3.12)
Mounting: 4x.166 diameter holes

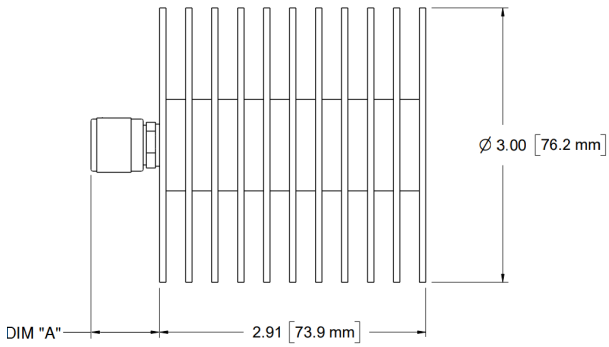
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Termination WA1432



DC - 4.0 GHz 100 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1432
DC - 4.0	1.25

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 1.0% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation attribute.*

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

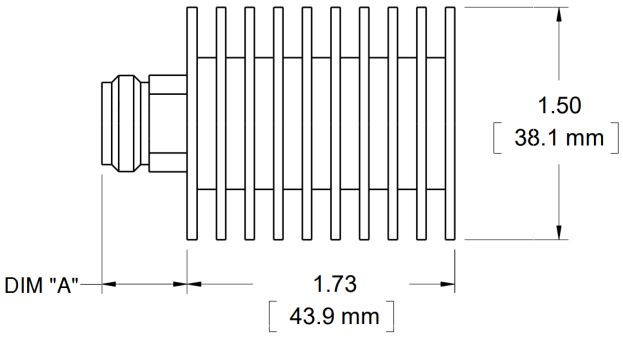
Weight: 0.37 (13.1)
Diameter: 76.2 (3.0)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1433 & WA1434

WA1434: DC - 4.0 GHz
WA1433: DC - 8.5 GHz

25 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1434: DC - 4.0 GHz.
WA1433: DC - 8.5 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 1.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR WA1433, WA1434
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

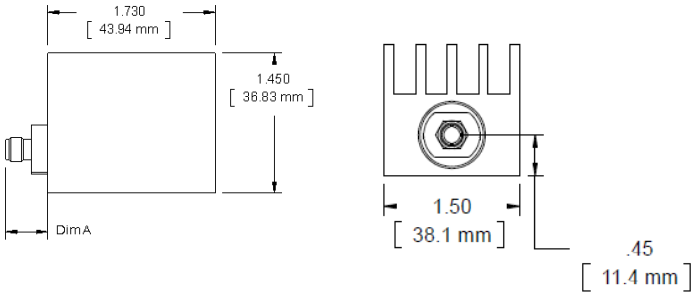
Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: .28 (9.88)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), ork g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1433B& WA1434B

WA1434B: DC - 4.0 GHz
WA1433B: DC - 8.5 GHz **25 WATTS**



Features

Type N, TNC, or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1434: DC - 4.0 GHz.
WA1433: DC - 8.5 GHz.

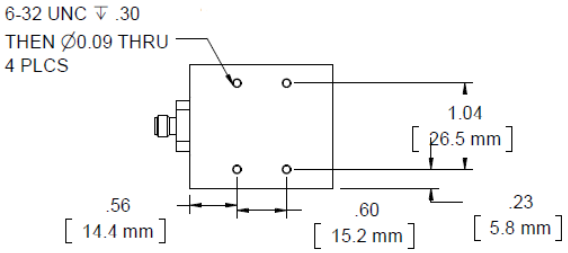
Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 1.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*



Maximum VSWR:

Frequency (GHz)	VSWR
	WA1433B, WA1434B
DC - 4.0	1.20
4.0 - 8.5	1.30

Dimensions:

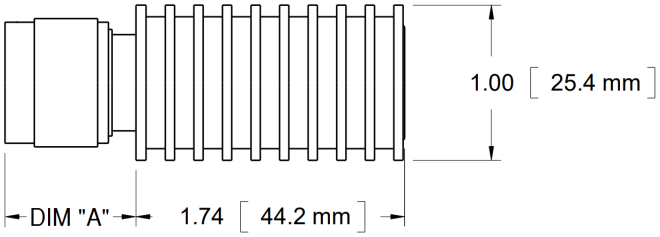
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.17 (6.06)
Height: 36.8 (1.45)
Width: 38.1 (1.50)
Mounting: 4x 6-32 UNC, 0.09 Thru

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1434L

DC - 4.0 GHz 20 WATTS



Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 1.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1434L
DC - 4.0	1.20

Dimensions:

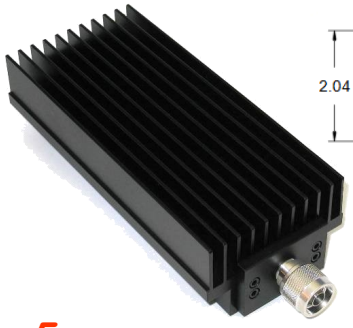
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

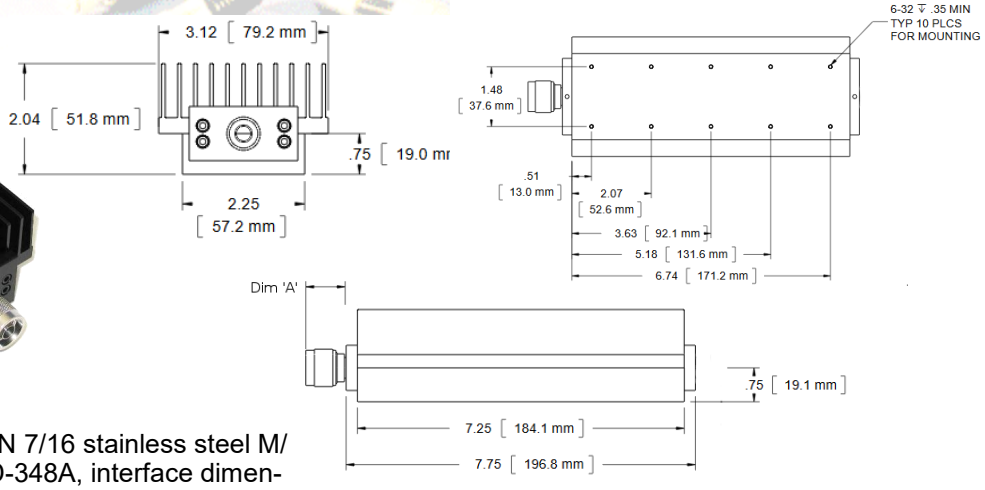
Weight: .28 (9.88)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1435

DC - 8.5 GHz 250 WATTS





Features

Type N, TNC, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **250 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **5 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1435
DC - 4.0	1.30
4.0 - 8.5	1.45

Dimensions:

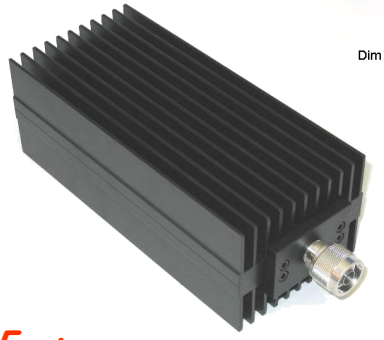
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

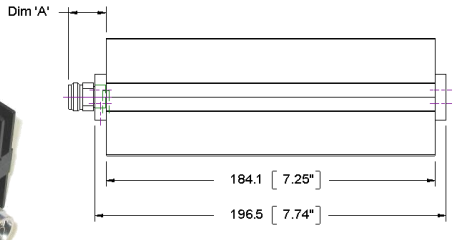
Weight: 0.5 (17.6)
Height: 51.8 (2.04)
Width: 79.2 (3.12)
Mounting: 6-32 .35"

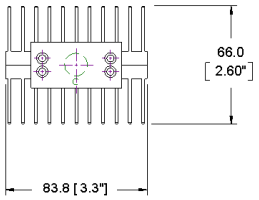
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1436

DC - 8.5 GHz 300 WATTS







Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **300 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **5 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1436
DC - 4.0	1.30
4.0 - 8.5	1.45

Dimensions:

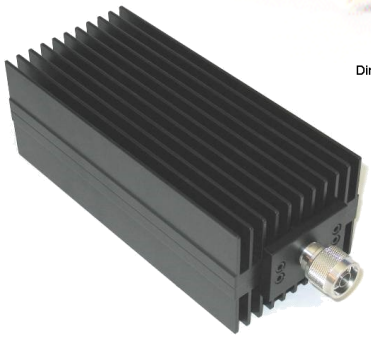
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

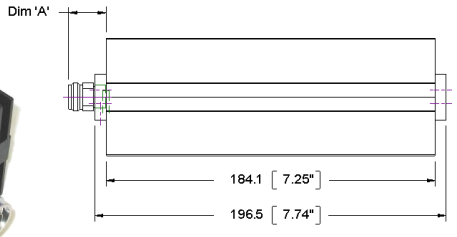
Weight: 1.28 (45.2)
Height: 66 (0.60)
Width: 83.8 (3.30)

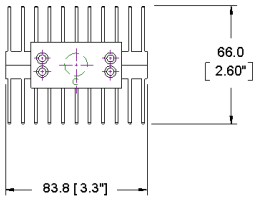
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1438

DC - 5.0 GHz 300 WATTS







Features

Type N, or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 5.0 GHz.

Power Rating: **300 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 25 W at 125°C. **10 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1438
DC - 2.0	1.15
2.0 - 5.0	1.25

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.28 (45.2)
Height: 66 (2.60)
Width: 83.8 (3.30)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

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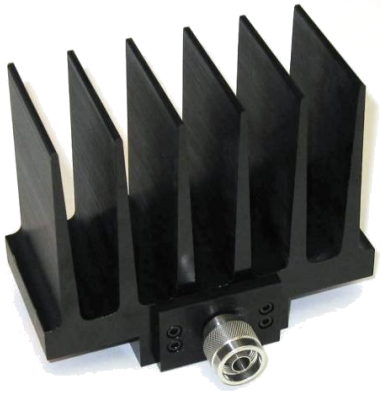
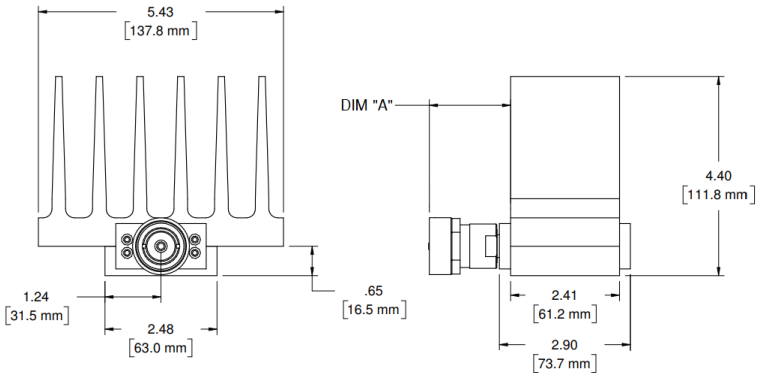
EMAIL: sales@WeinschelAssociates.com

Termination WA1439

DC - 3.0 GHz 150 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **10 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1439
DC - 3.0	1.20

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

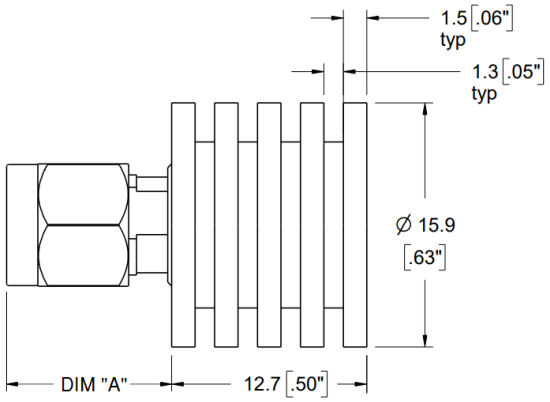
Weight: 1.0 (35.3)
Height: 111.8 (4.4)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1443

WA1443: DC - 18.0 GHz
WA1443/6: DC - 6.0 GHz
WA1443/12: DC - 12.4 GHz

5 WATTS



Features

Type SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position. *Compact design provides one of the lowest power/size ratios available.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1443/6: DC - 6.0 GHz.
WA1443/12: DC - 12.4 GHz.
WA1443: DC - 18.0 GHz.

Power Rating: 5 W maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	All variants
DC - 18.0	1.20

Dimensions:

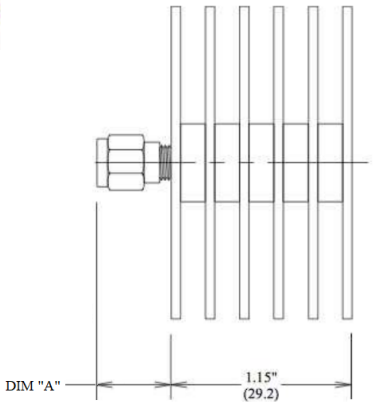
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	7.7 (.30)
SMA M -02	10.4 (.41)

Weight: 6.8 (.24)
Diameter: 15.9 (.63)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1444

DC - 26.5 GHz 25 WATTS



Features

Precision 3.5 mm or 2.92 mm stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position. *Compact design provides one of the lowest power/size ratios available.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **0.5 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1444
DC - 26.5	1.25

Dimensions:

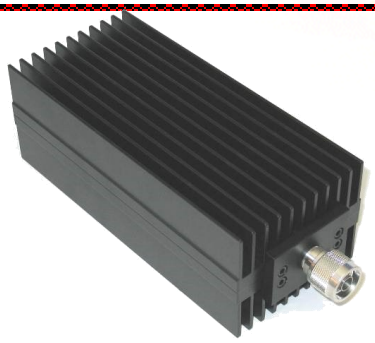
Connector Type (- code)	Length
	Dimension 'A'
3.5mm F -11	10.7 (.42)
3.5mm M -12	11.6 (.46)
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

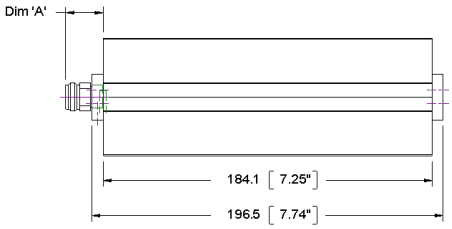
Weight: .10 (3.53)
Diameter: 50.8 (2.0)

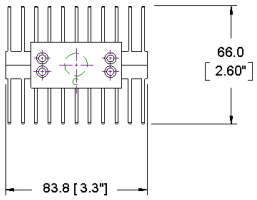
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1445

DC - 3.0 GHz 250 WATTS







Features

Type N, TNC or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **250 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **10 kW** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1445
DC - 3.0	1.10

Dimensions and Weight:

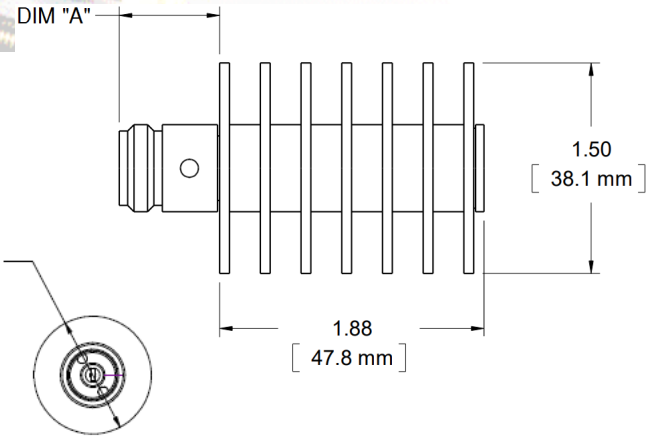
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 1.28 (45.2)
Height: 66 (2.60)
Width: 83.8 (3.30)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1446

DC - 18.0 GHz 25 WATTS



Features

N-type or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2.5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: 55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1446
DC - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Dimensions:

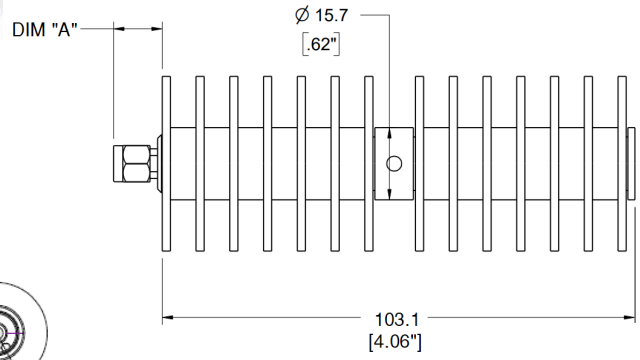
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)

Weight: 0.12 (4.23)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1447

DC - 18.0 GHz 50 WATTS



Features

N-type or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1447
DC - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Dimensions:

Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)

Weight: 0.21 (7.41)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

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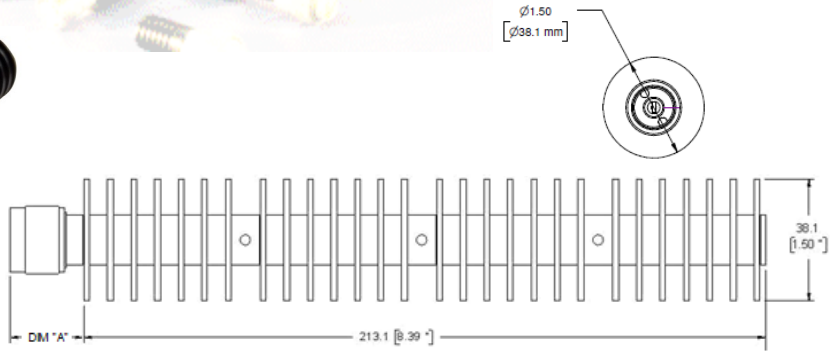
Termination WA1448

DC - 18.0 GHz 100 WATTS



Features

N-type or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1448
DC - 8.0	1.25
8.0 - 12.4	1.35
12.4 - 18.0	1.45

Dimensions:

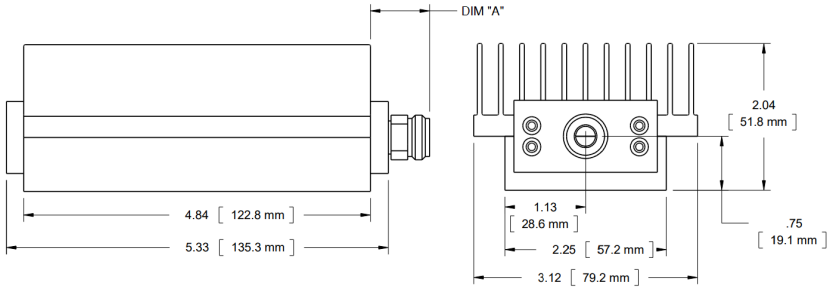
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)

Weight: 0.41 (14.46)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1449

DC - 8.5 GHz 150 WATTS



Features

Type N, SMA or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **5 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1449
DC - 4.0	1.25
4.0 - 8.5	1.35

Dimensions:

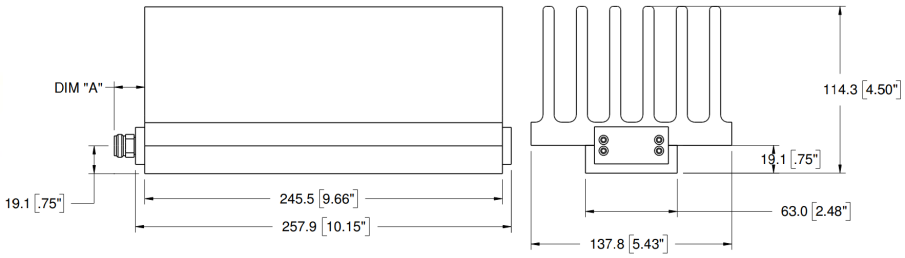
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 1.28 (45.2)
Height: 51.8 (2.04)
Width: 79.2 (3.12)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1451

DC - 8.5 GHz 500 WATTS



Features

Type N or 7/16 DIN stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Useable to 10 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 8.5 GHz.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 30 W at 125°C. **5 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1451
DC - 4.0	1.25
4.0 - 8.5	1.35

Dimensions:

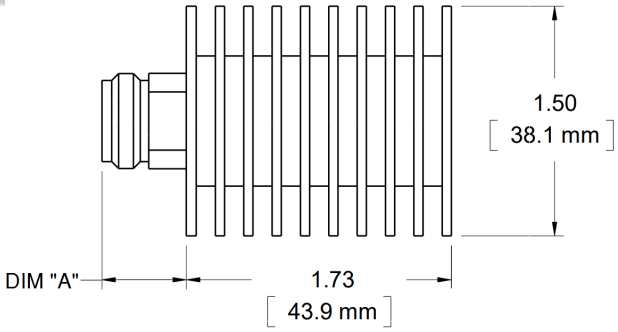
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 3.7 (130.5)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1452

DC – 4.0 GHz 25 WATTS



Features

Type N, DIN 7/16, TNC or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz.

Power Rating: **25 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 1.5 W at 125°C. **5 kW** peak power (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1452
DC - 2.0	1.10
2.0 - 4.0	1.20

Dimensions:

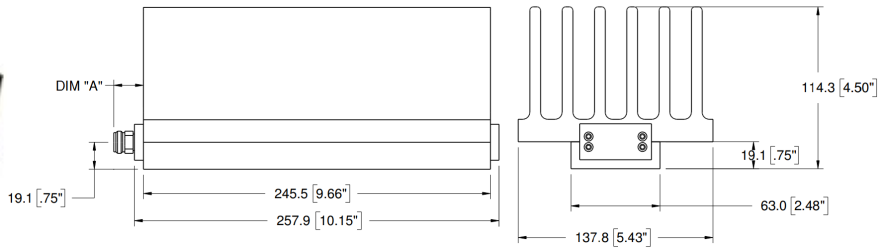
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: .28 (9.88)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1453

DC - 3.0 GHz 500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 30 W at 125°C. **10 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1453
DC - 3.0	1.10

Dimensions:

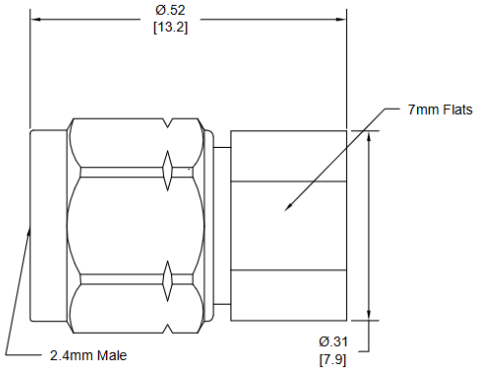
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 3.7 (130.5)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1454

DC – 40.0 GHz 2 WATTS



Features

Precision 2.92 mm stainless steel connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Compact, rugged design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1454: DC - 40.0 GHz.

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 85°C. **200 W** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Option: Chain.

Maximum VSWR:

Frequency (GHz)	VSWR WA1454
DC - 26.5	1.25
26.5 - 40.0	1.45

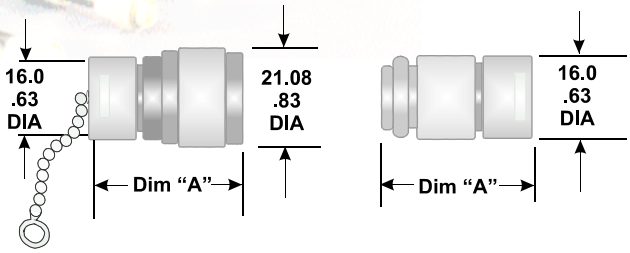
Dimensions:

Length: 14.5 (.57)
Weight: 3.83 (.135)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1455

WA1455/6: DC – 6.0 GHz
WA1455/12: DC – 12.4 GHz
WA1455: DC – 18.0 GHz **2 WATTS**



Features

Type N or TNC M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Excellent VSWR repeatability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1455/6: DC - 6.0 GHz.
WA1455/12: DC - 12.4 GHz.
WA1455: DC - 18.0 GHz.

Power Rating: **2 W** maximum rated average power at 25°C, de-rated linearly to 0.5 W at 125° C. **1 kW** peak power (5 µsec pulse width, 0.1% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Ternary Plated Brass Bodies and Coupling Nuts (Passivated stainless steel available as an option). Stainless steel or gold-plated beryllium copper contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Option: Chain.

Maximum VSWR:

Frequency (GHz)	VSWR (N-Type)		
	WA1455	WA1455/6	WA1455/12
DC - 8.0	1.10	1.10	1.10
8.0 - 12.4	1.15	N/A	1.15
12.4 - 18.0	1.20	N/A	N/A

Frequency (GHz)	VSWR (TNC)		
	WA1455	WA1455/6	WA1455/12
DC - 8.0	1.15	1.15	1.15
8.0 - 12.4	1.20	N/A	1.20
12.4 - 18.0	1.30	N/A	N/A

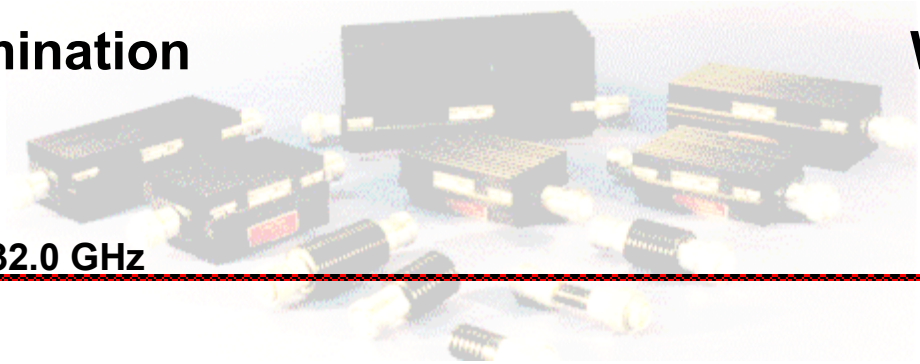
Dimensions:

Dimension	N-Type	
	N-Type F -03	N-Type M -04
Length (Dim A)	28.8 (1.13)	30.0 (1.18)
Weight (nominal)	40.5 (1.430)	36.4 (1.29)

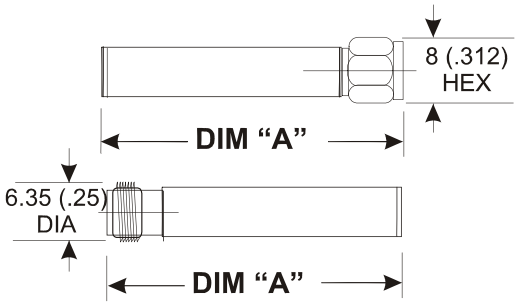
Dimension	TNC	
	TNC F -05	TNC M -06
Length (Dim A)	26.2 (1.03)	29.0 (1.14)
Weight (nominal)	15.2 (0.54)	22.3 (0.79)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1456



DC – 32.0 GHz 2 WATTS



Features

3.5 mm stainless steel connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL -3933 environmental specification. Compact, rugged design.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC to 32.0 GHz

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 85°C. **200 W** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Passivated stainless steel body and connector. Gold plated beryllium copper contact. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Option: Chain.

Maximum VSWR:

Frequency (GHz)	VSWR WA1456
DC - 26.5	1.25
26.5 - 32.0	1.40

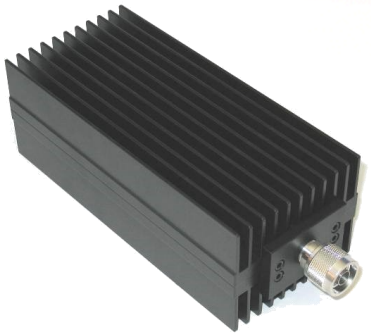
Dimensions:

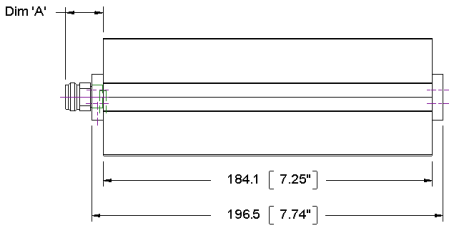
Dimension	Connector Type	
	3.5 mm (F), -11	3.5 mm (M) -12
Length (Dim A)	15 (0.59)	15 (0.59)
Weight (nominal)	.0049 (0.14)	.0049 (0.14)

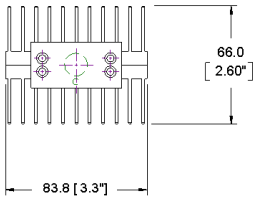
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1457

DC - 5.0 GHz 150 WATTS







Features

SMA, Type N, DIN 7/16, or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 5.0 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **10 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR WA1457
DC - 2.0	1.10
2.0 - 5.0	1.15

Dimensions:

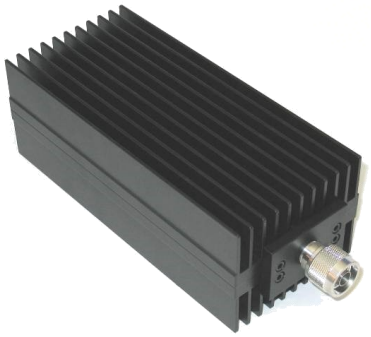
Connector Type (- code)	Length Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

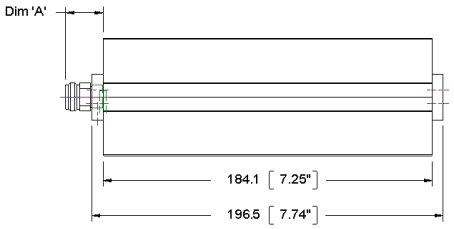
Weight: 0.75 (26.5)
Height: 66.0 (2.60)
Width: 83.8 (3.30)

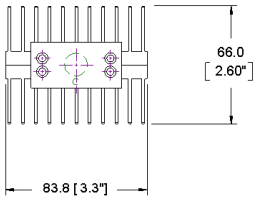
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1458

DC - 6.0 GHz 250 WATTS







Features

Type N, DIN 7/16, or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 6.0 GHz.

Power Rating: **250 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 25 W at 125°C. **10 kW** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1458
DC - 2.0	1.10
2.0 - 6.0	1.15

Dimensions:

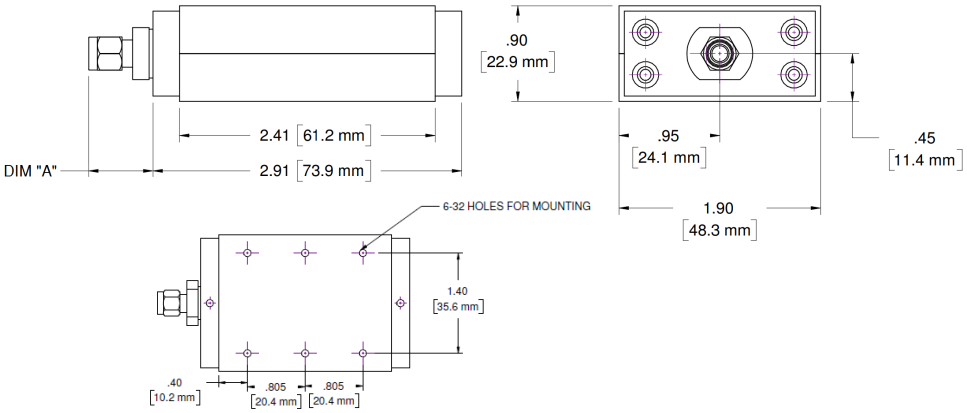
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.39)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)
7/16 DIN F -07	30.5 (1.20)
7/16 DIN M -08	31.8 (1.25)

Weight: 0.75 (26.5)
Height: 66 (2.60)
Width: 83.8 (3.30)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1459

DC - 3.0 GHz 100 WATTS



Features

Type N, TNC or SMA stainless steel M/F connecters per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **100 W** maximum average rated power with case temperature held to a maximum of 100°C. **10 kW** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1459
DC - 3.0	1.15

Dimensions:

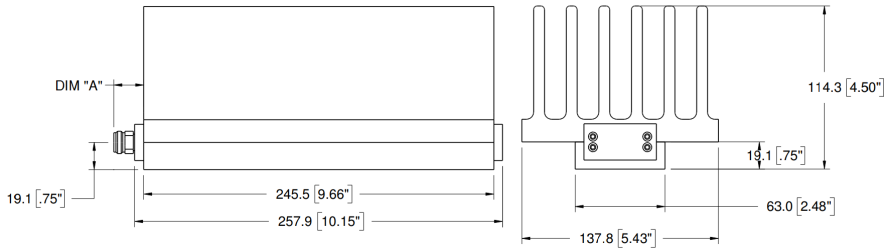
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.14 (4.9)
Height: 22.9 (0.9)
Width: 48.3 (1.90)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1460

DC - 5.0 GHz 500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 5.0 GHz.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 30 W at 125°C. **10 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR WA1460
DC - 2.5	1.10
2.5—5.0	1.20

Dimensions:

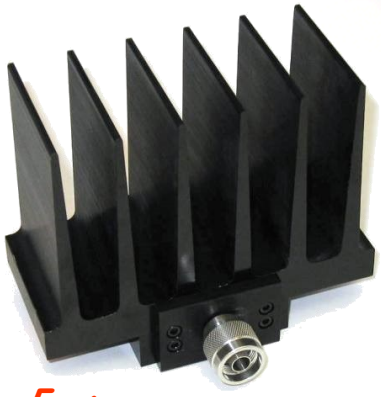
Connector Type (- code)	Length Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

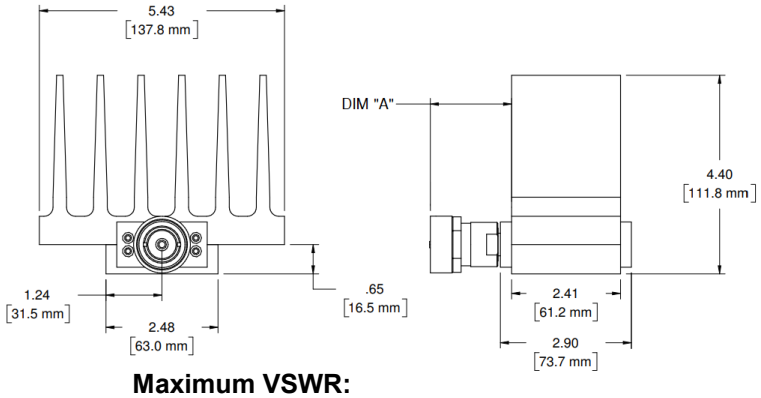
Weight: 3.7 (130.5)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1465

DC - 3.0 GHz 150 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 125°C. **10 kW** peak power (5 µsec pulse width, 0.75% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1465
DC - 3.0	1.20

Dimensions:

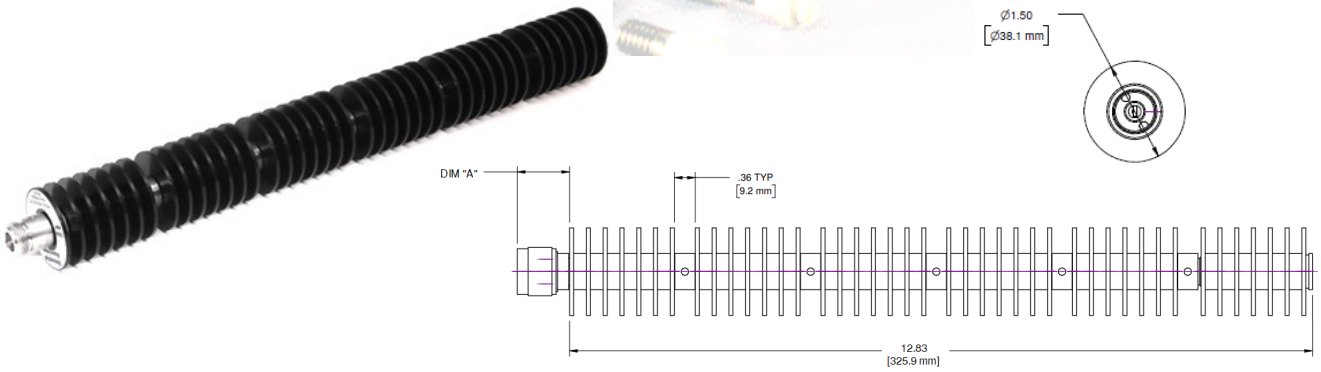
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 1.0 (35.3)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1466

DC - 18.0 GHz 150 WATTS



Features

SMA, Type N, or TNC stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **150 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 15 W at 125°C. **5 kW** peak power (5 µsec pulse width, 1.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1466
DC - 2.5	1.10
2.5—5.0	1.20

Dimensions:

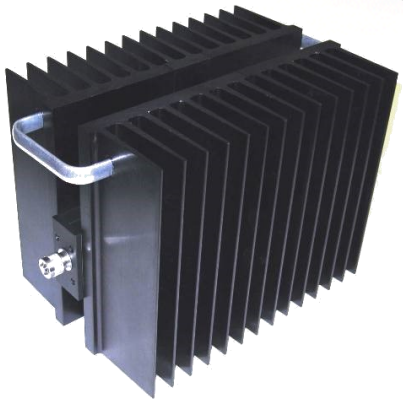
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

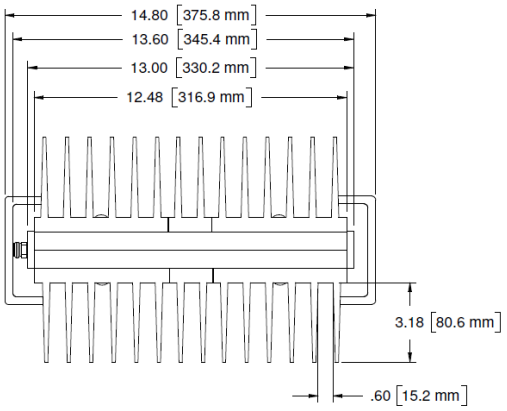
Weight: 0.62 (21.87)
Diameter: 38.1 (1.5)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available

Termination WA1470

DC - 3.0 GHz 1000 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position. *Natural convection cooling.*

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **1000 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 100 W at 125°C. **10 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

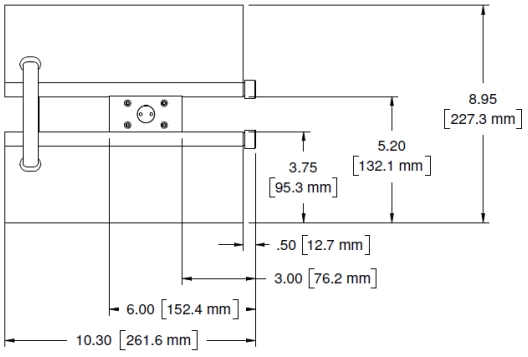
Frequency (GHz)	VSWR WA1470
DC - 3.0	1.35

Dimensions:

Connector Type (- code)	Length Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 18.20 (130.5)
Height: 261.6 (10.30)
Width: 227.3 (8.95)

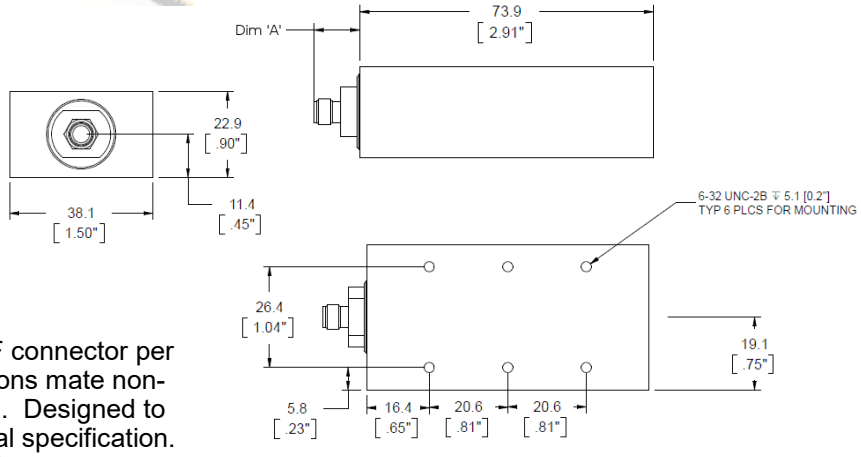
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Termination WA1471 & WA1472

WA1471: DC – 4.0 GHz
WA1472: DC – 8.5 GHz

50 WATTS



Features

N-type or SMA stainless steel M/F connector per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1471: DC - 4.0 GHz.
WA1472: DC - 8.5 GHz.

Power Rating: **50 W** maximum rated average power with case temperature held to +100°C using conductive heat sink. **5 kW** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR	
	WA1471	WA1472
DC - 4.0	1.20	1.20
4.0 - 8.5	N/A	1.30

Dimensions:

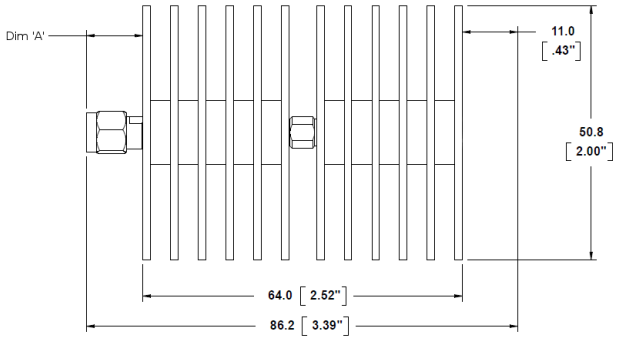
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 0.14 (4.94)
Height: 22.9 (0.90)
Width: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1473

DC – 28.0 GHz 50 WATTS



Features

3.5 mm stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 28.0 GHz.

Power Rating: **50 W** maximum rated average power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C . **500 W** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper or stainless steel contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1473
DC - 18.0	1.30
18.0 - 28.0	1.40

Dimensions:

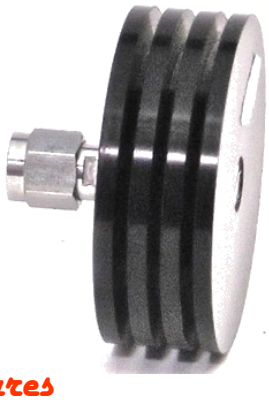
Connector Type (- code)	Length
	Dimension 'A'
3.5mm F -11	10.7 (.42)
3.5mm M -12	11.6 (.46)

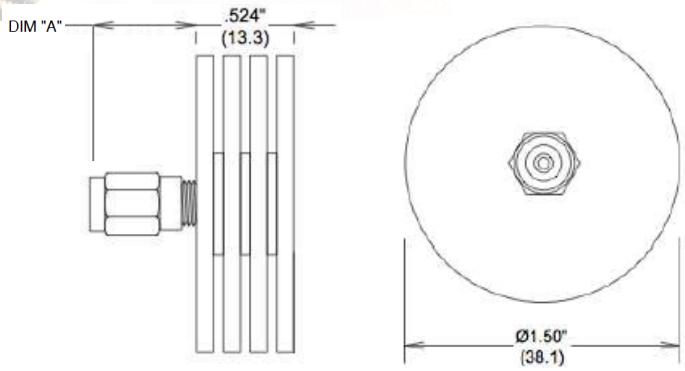
Weight: 0.20 (7.05)
Diameter: 50.8 (2.00)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1475

DC – 40.0 GHz 5 WATTS





Features

Precision 2.92mm M/F connectors mate non-destructively with SMA per MIL-PRF-39012, 3.5mm and other 2.92mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Flat response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz.

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C (horizontal mounting). **200 W** peak power (5 µsec pulse width, 1.25% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1475
DC - 18.0	1.20
18.0 - 40.0	1.35

Dimensions and Weight:

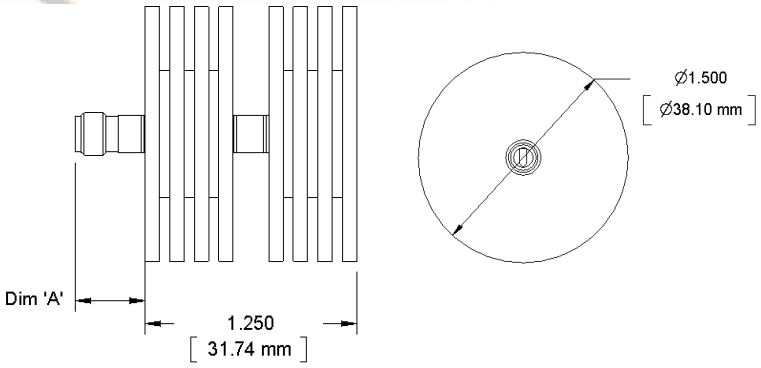
Connector Type (- code)	Dimension
	Length (Dimension A)
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Weight: .035 (1.2)
Diameter: 38.1 (1.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1476

DC – 40.0 GHz 10 WATTS



Features

Precision 2.92mm M/F connectors mate non-destructively with SMA per MIL-PRF-39012, 3.5mm and other 2.92mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Flat response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz.

Power Rating: **10 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 1 W at 125°C (horizontal mounting). **200 W** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1476
DC - 18.0	1.25
18.0 - 40.0	1.40

Dimensions:

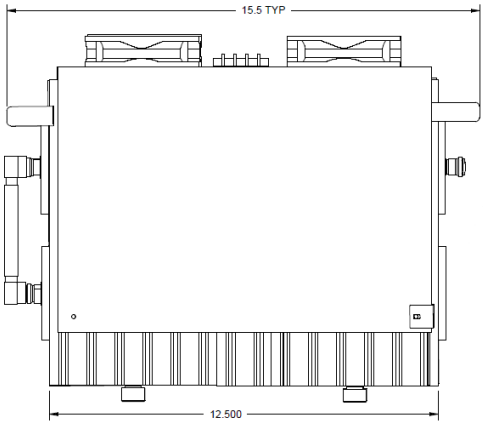
Connector Type (- code)	Dimension
	Length (Dimension A)
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

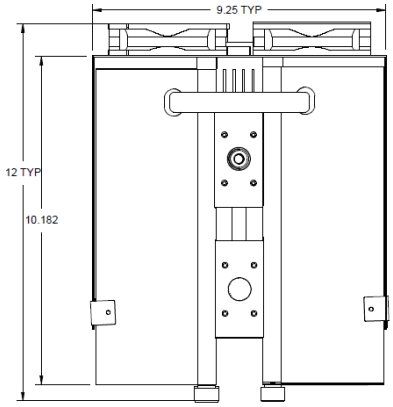
Diameter: 38.1 (1.50)
Weight: .14 (4.9)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1480

DC - 3.0 GHz 2000 WATTS





Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Forced Air Cooling.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 3.0 GHz.

Power Rating: **2000 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 100 W at 125°C. **10 kW** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1480
DC - 3.0	1.35

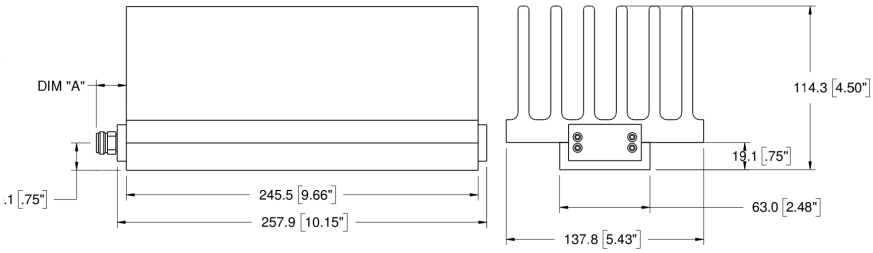
Dimensions:

Height:	295.0 (11.61)
Width:	234.0 (9.21)
Length:	394.0 (15.5)
Weight:	20.55 (724.8)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1481

DC - 10 GHz 500 WATTS



Features

Type N or DIN 7/16 stainless steel M/F connector per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 10.0 GHz.

Power Rating: **500 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 50 W at 125°C. **5 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connector. Gold plated beryllium copper or stainless steel contact. RoHS Compliant.

Calibration: Insertion Loss and VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1481
DC - 4.0	1.25
4.0 - 8.0	1.45
8.0 - 10.0	1.70

Dimensions:

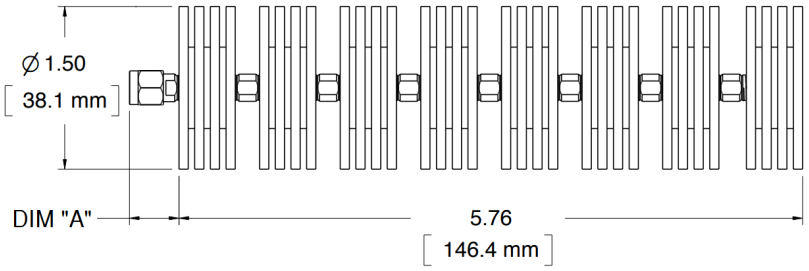
Connector Type (- code)	Length
	Dimension 'A'
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
DIN 7/16 F -07	30.5 (1.20)
DIN 7/16 M -08	31.8 (1.25)

Weight: 3.7 (130.5)
Height: 114.3 (4.5)
Width: 137.8 (5.43)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1488

DC – 40.0 GHz 50 WATTS



Features

Precision 2.92mm M/F connectors mate non-destructively with SMA per MIL-PRF-39012, 3.5mm and other 2.92mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Flat response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0 W at 100°C. **200 W** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +100°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1488
DC - 18.0	1.30
18.0 - 40.0	1.60

Dimensions:

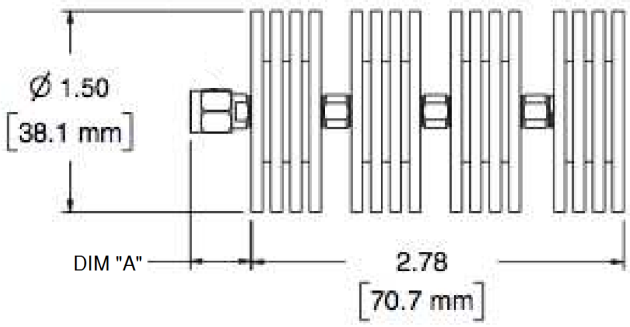
Connector Type (- code)	Dimension
	Length (Dimension A)
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Diameter: 38.1 (1.50)
Weight: 0.29 (10.23)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1489

DC – 40.0 GHz 20 WATTS



Maximum VSWR:

Frequency (GHz)	VSWR WA1489
DC - 18.0	1.30
18.0 - 40.0	1.45

Dimensions and Weight:

Connector Type (- code)	Dimension Length (Dimension A)
2.92mm F -13	10.6 (.42)
2.92mm M -14	11.5 (.45)

Diameter: 38.1 (1.50)
Weight: .20 (7.1)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Features

Precision 2.92mm M/F connectors mate non-destructively with SMA per MIL-PRF-39012, 3.5mm and other 2.92mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Flat response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz.

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 2 W at 125°C (horizontal mounting). **200 W** peak power (5 µsec pulse width, 5% duty cycle).

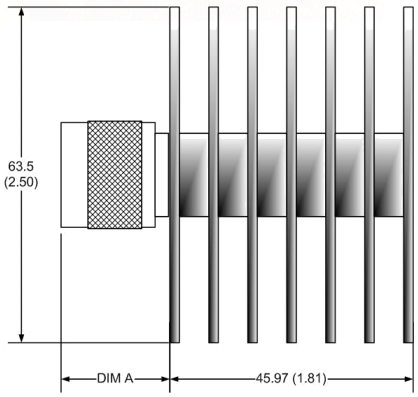
Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Termination WA1490

DC – 18.0 GHz 50 WATTS



Features

Type N, SMA, or TNC connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1490
DC - 18.0	1.20:1 maximum

Dimensions:

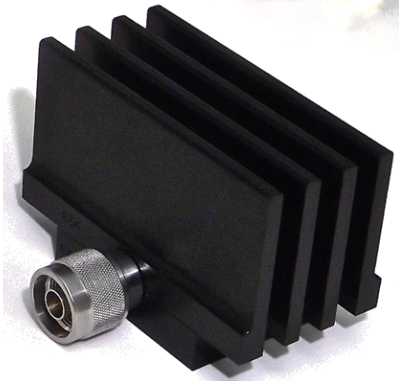
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

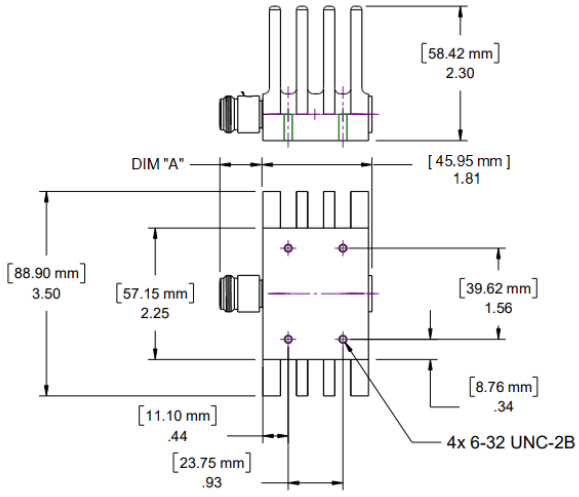
Diameter: 63.5 (2.50)
Weight: 0.21 (7.41)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1490B

DC – 18.0 GHz 50 WATTS





Features

Type N, SMA, or TNC connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **50 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 5 W at 125°C. **1 kW** peak power (5 µsec pulse width, 2.5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1490B
DC - 18.0	1.20

Dimensions:

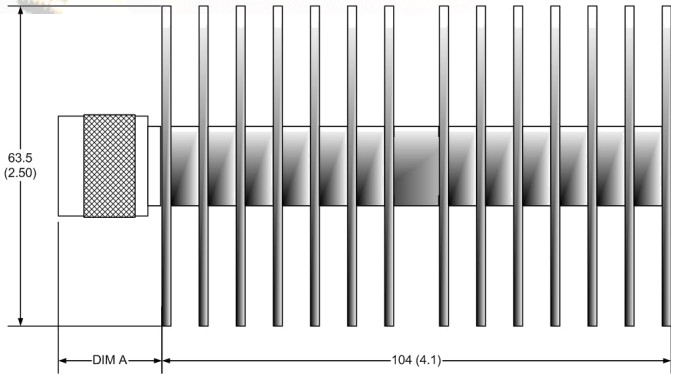
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Weight: 0.41 (14.5)
Height: 58.42 (2.30)
Width: 88.9 (3.50)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1491

DC – 18.0 GHz 100 WATTS



Features

Type N, SMA, or TNC connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **100 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 10 W at 125°C. **1 kW** peak power (5 µsec pulse width, 5% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation*

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1491
DC - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Dimensions:

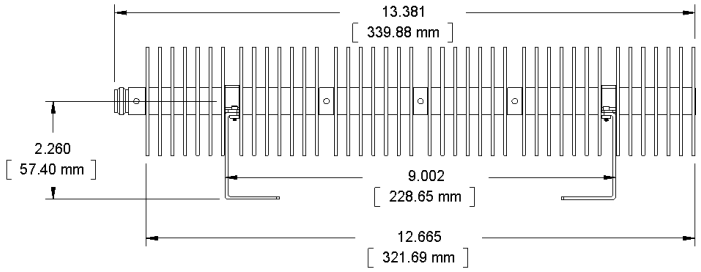
Connector Type (- code)	Length
	Dimension 'A'
SMA F -01	9.8 (.39)
SMA M -02	10.9 (.43)
N-Type F -03	14.9 (.59)
N-Type M -04	22.7 (.89)
TNC F -05	14.4 (.57)
TNC M -06	17.7 (.70)

Diameter: 63.5 (2.50)
Weight: 0.41 (14.46)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Termination WA1495

DC – 18.0 GHz 200 WATTS



Features

Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **200 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 20 W at 125°C. **1 kW** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Low Intermodulation Option: *Add -LIM after connector option to specify low intermodulation.*

Maximum VSWR:

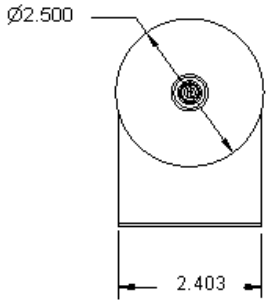
Frequency (GHz)	VSWR
	WA1495
DC - 18.0	1.50

Dimensions:

Diameter: 63.5 (2.50)
Weight: 1.02 (35.82)
Length: 339.9 (13.4)

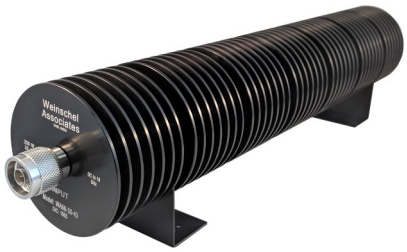
Options: Stands for mounting (shown above).

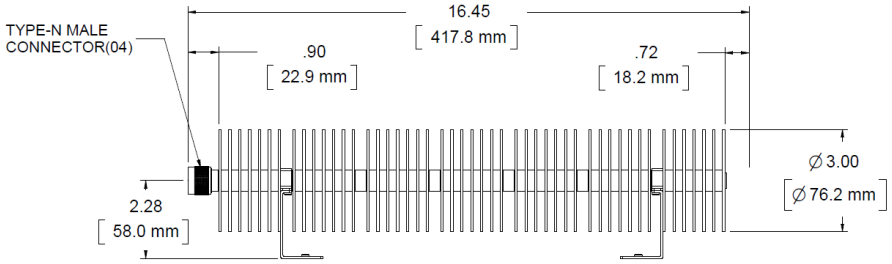
Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Termination WA1496

DC – 18.0 GHz 250 WATTS





Features

Type N or TNC M/F connectors per MIL-STD -348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position with included mounting stands.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Rating: **250 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 20 W at 125°C. **1 kW** peak power (5 µsec pulse width, 10% duty cycle).

Temperature Range: -55°C to +125°C.

Construction: Black aluminum alloy body with passivated stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1496
DC - 18.0	1.60

Dimensions:

Height:	96.1 (3.78)
Diameter:	76.2 (3.00)
Length:	417.8 (16.45)
Weight:	1.59 (56)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

RESISTIVE POWER SPLITTERS AND DIVIDERS

DC – 40.0 GHz **1 WATTS**

Resistive Power Splitters

Usage: Use in RF and wireless applications where one of the two outputs are included in a leveling loop or used as a reference in a ratio system providing an output signal whose source impedance is matched to 50 ohms.

Features: Excellent amplitude tracking, low equivalent output SWR, unidirectional

Resistive Power Splitters							
Model Number	Average Power (W)	Frequency Range DC - (GHz)	Maximum Insertion Loss (dB)	Amplitude Tracking (dB, max)	Phase Tracking (± deg)	Connectors	Page No.
WA1507R	1	4	6.5	0.15	4	SMA	155, 156
PS-018	1	18	7.5	0.2	4	N	154
WA1593	1	26.5	8.5	0.25	4	3.5 mm	157, 158
WA1534	1	40	10.5	0.5	4	2.92 mm	159, 160

Resistive Power Dividers

Usage: Use in general RF and wireless applications where RF signals are to be either divided or combined.

Features: Excellent amplitude and phase tracking, bi-directional, isolated outputs

Resistive Power Dividers							
Model Number	Average Power (W)	Frequency Range DC - (GHz)	Maximum Insertion Loss (dB)	Amplitude Tracking (dB, max)	Phase Tracking (± deg)	Connectors	Page No.
WA1549R	1	4	6.5	0.15	4	SMA	149
WA1506A	1	18	7.5	0.50	5	N	145
WA1515	1	18	7.5	0.50	5	SMA	146 - 148
WA1574	1	26.5	6.5	1.0	2	3.5 mm	150, 151
WA1575	1	40	6.5	0.50	2	2.92 mm	152, 153

WEINSCHEL ASSOCIATES
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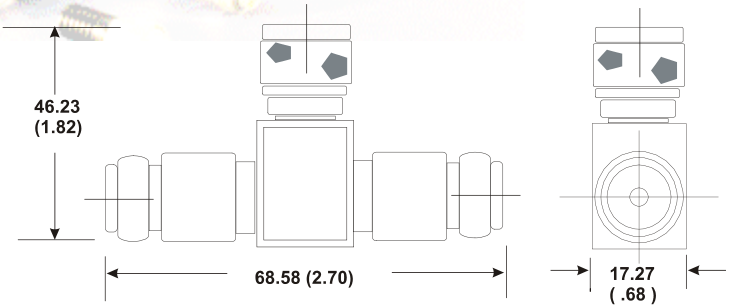
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

Broadband Resistive Power Divider WA1506A

DC - 18.0 GHz 1 WATT



Features

Type N male (combined port), Type N female (divided ports) connectors per MIL-STD-348 interface non-destructively with MIL-PRF-39012 connectors.

Features accurate division and low frequency sensitivity, high stability and matched ports.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Tracking: ±2° nominal between output ports, ±5° maximum.

Accurate Division and Low Frequency Sensitivity: The symmetry of output between the two arms is excellent across the frequency range.

Maximum Amplitude Tracking

Frequency Range (GHz)	Tracking (dB)
	WA1506A
DC - 4.0	0.20
4.0 - 10.0	0.40
10.0 - 18.0	0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1506A
DC - 10.0	1.25
10.0 - 18.0	1.35

Dimensions:

Weight:	0.14 (4.94)
Length:	68.58 (2.7)
Width:	17.27 (0.68)
Height:	46.23 (1.82)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

High Stability: Low temperature and power coefficients ensure attenuator stability.

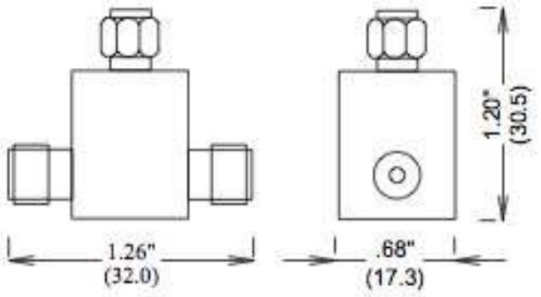
Matched Ports: Symmetrical 6 dB divisions permits any port to be used as input

Insertion Loss: 6 dB nominal, +1.2/-0.2 dB to 10.0 GHz; +1.5/-0.2 dB to 18 GHz.

Number of Ports: 3 interchangeable for input and output.

Broadband Resistive Power Divider WA1515

DC - 18.0 GHz 1 WATT



Features

Male SMA port 1, female SMA ports 2 and 3; all ports mate non-destructively with other SMA, 2.92mm and 3.5 mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Power Coefficient: < 0.005 dB/dB/W

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Shift: ±2° nominal between output ports, ±5° maximum.

Insertion Loss: 6 dB nominal, -0.2, +1.2 dB maximum to 10.0 GHz; +1.5 dB maximum to 18 GHz.

Maximum Amplitude Tracking

Frequency Range (GHz)	Tracking (dB)
	WA1515
DC - 4.0	0.20
4.0 - 10.0	0.40
10.0 - 18.0	0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1515
DC - 10.0	1.25
10.0 - 18.0	1.35

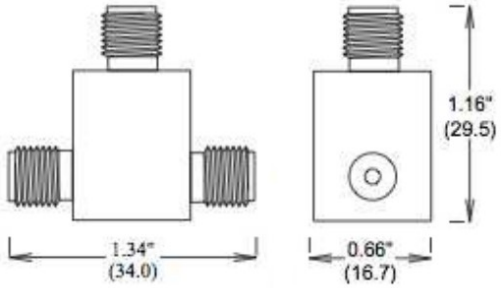
Dimensions:

Weight:	0.05 (1.76)
Length:	34.54 (1.36)
Width:	17.27 (0.68)
Height:	30.48 (1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1515-1

DC - 18.0 GHz **1 WATT**



Features

Female SMA port 1, 2, and 3; all ports-mate non -destructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Power Coefficient: < 0.005 dB/dB/W

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Shift: ±2° nominal between output ports, ±5° maximum.

Insertion Loss: 6 dB nominal, -0.2, +1.2 dB maximum to 10.0 GHz; +1.5 dB maximum to 18 GHz.

Maximum Amplitude Tracking

Frequency Range (GHz)	Tracking (dB)
	WA1515-1
DC - 4.0	0.20
4.0 - 10.0	0.40
10.0 - 18.0	0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1515-1
DC - 10.0	1.25
10.0 - 18.0	1.35

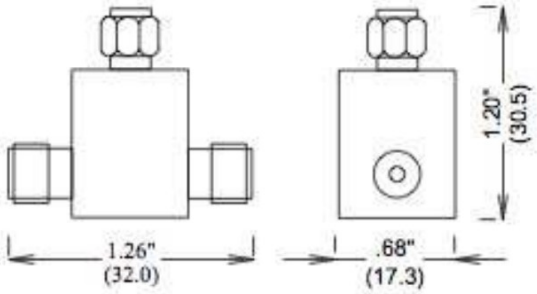
Dimensions:

Weight:	00.05(1.76)
Length:	34.54(1.36)
Width:	17.27(0.68)
Height:	30.48(1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1515-2

DC - 18.0 GHz **1 WATT**



Features

Male SMA port 1, 2, and 3; all ports-mate non-destructively with other SMA, 2.92mm and 3.5 mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Power Coefficient: < 0.005 dB/dB/W

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Shift: ±2° nominal between output ports, ±5° maximum.

Insertion Loss: 6 dB nominal, -0.2, +1.2 dB maximum to 10.0 GHz; +1.5 dB maximum to 18 GHz.

Maximum Amplitude Tracking

Frequency Range (GHz)	Tracking (dB)
	WA1515-2
DC - 4.0	0.20
4.0 - 10.0	0.40
10.0 - 18.0	0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1515-2
DC - 10.0	1.25
10.0 - 18.0	1.35

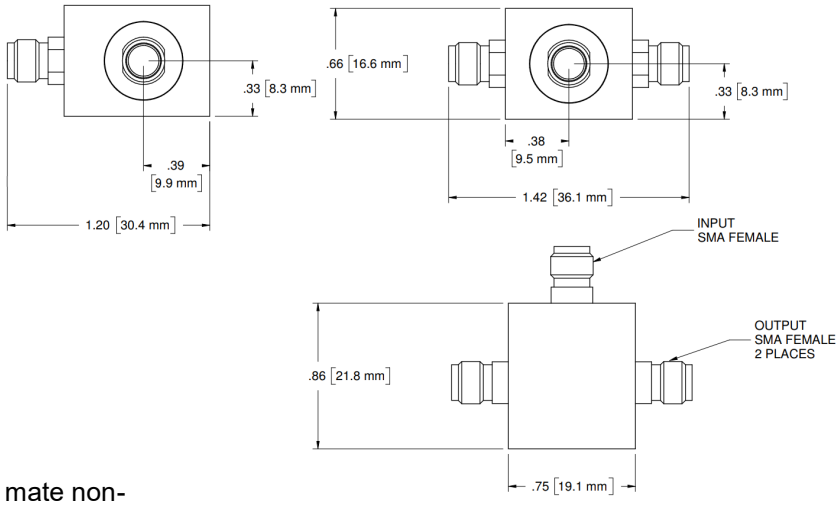
Dimensions:

Weight:	0.05 (1.76)
Length:	34.54 (1.36)
Width:	17.27 (0.68)
Height:	30.48 (1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1549R

DC - 4.0 GHz 1 WATT



Features

Female SMA connectors for all ports, mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Optional male connectors are available. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz

Power Coefficient: < 0.005 dB/dB/W

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.1 W at 125°C. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Tracking : < 4°

Insertion Loss: 6 dB nominal, 6.5 dB maximum (between input and either output).

Maximum Amplitude Tracking:

Frequency Range (GHz)	Tracking (dB)
	WA1549R
DC - 4.0	< 0.15

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1549R
DC - 4.0	1.25

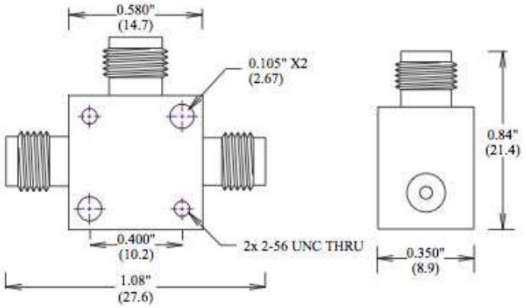
Dimensions:

Weight:	0.05 (1.76)
Length:	34.54 (1.36)
Width:	17.27 (0.68)
Height:	30.48 (1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1574

DC - 26.5 GHz 1 WATT



Features

Female 3.5mm port 1, 2, and 3; all ports mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Lightweight miniature package with high power capability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz

Power Coefficient: < 0.005 dB/dB/W. Bidirectional in power.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Tracking: < 2°

Insertion Loss: 6 dB nominal, 6.5 dB maximum (between input and either output).

Maximum Amplitude Tracking:

Frequency Range (GHz)	Tracking (dB)
	WA1574
DC - 26.5	< 1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1574
DC - 26.5	1.7

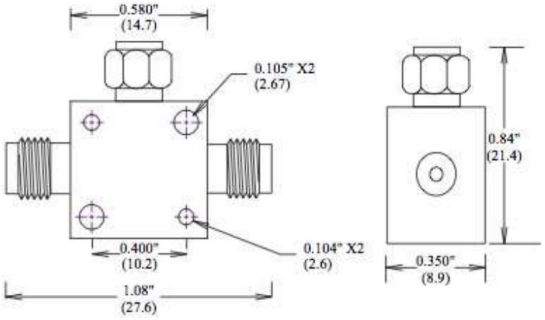
Dimensions:

Weight:	0.01 (1.76)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1574-2

DC - 26.5 GHz **1 WATT**



Features

Male 3.5mm port 1, (2) female 3.5mm ports 2 and 3; all ports -mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Lightweight miniature package with high power capability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz

Power Coefficient: < 0.005 dB/dB/W. Bidirectional in power.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Tracking: < 2°

Insertion Loss: 6 dB nominal, 6.5 dB maximum (between input and either output).

Maximum Amplitude Tracking:

Frequency Range (GHz)	Tracking (dB)
	WA1574-2
DC - 26.5	< 1.0

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1574-2
DC - 26.5	1.7

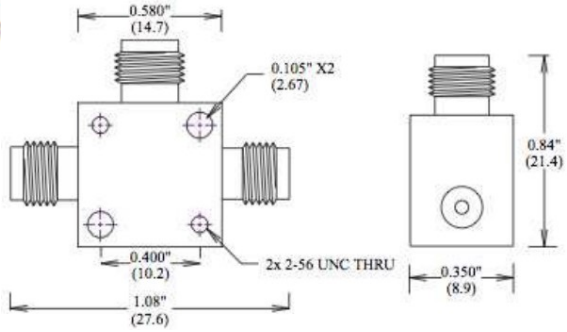
Dimensions:

Weight:	0.01 (1.76)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1575

DC - 40.0 GHz 1 WATT



Features

Female precision 2.92mm port 1, 2, and 3; all ports mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Lightweight miniature package with high power capability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Power Coefficient: < 0.005 dB/dB/W. Bidirectional in power.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase : < 2°

Insertion Loss: 6 dB nominal, 6.5 dB maximum (between input and either output).

Maximum Amplitude Tracking:

Frequency Range (GHz)	Tracking (dB)
	WA1574
DC - 19	< 0.25
19 - 40	< 0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1574
DC - 40.0	1.7

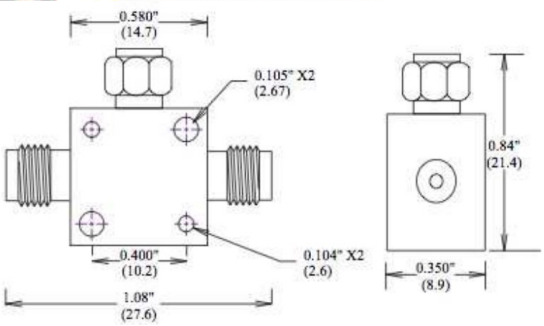
Dimensions:

Weight:	0.01 (1.76)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Divider WA1575-2

DC - 40.0 GHz 1 WATT



Features

Male precision 2.92 mm port 1, (2) female precision 2.92 mm ports 2 and 3; all ports -mate non-destructively with other SMA, 2.92 mm and 3.5 mm connectors. Designed to meet MIL-DTL-3933 environmental specification. Unit may be mounted in any position.

Lightweight miniature package with high power capability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Power Coefficient: < 0.005 dB/dB/W. Bidirectional in power.

Power Rating: **1 W** maximum average rated power to 25°C ambient temperature. **1 kW** peak power (5 µsec pulse width, 0.05% duty cycle).

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors; gold plated beryllium copper contacts. RoHS Compliant.

Phase Tracking : < 2°

Insertion Loss: 6 dB nominal, 6.5 dB maximum (between input and either output).

Maximum Amplitude Tracking:

Frequency Range (GHz)	Tracking (dB)
	WA1574
DC - 19	< 0.25
19 - 40	< 0.50

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1575-2
DC - 40.0	1.7

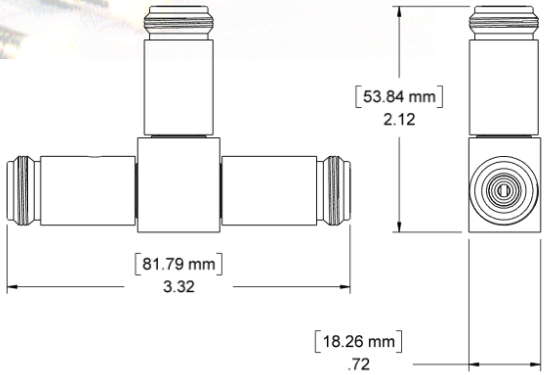
Dimensions:

Weight:	0.01 (1.76)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter PS018

DC - 18.0 GHz 1 WATT



Features

Type N stainless steel F connectors per MIL-STD-348A, mates nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.
Unit may be mounted in any position.

Excellent amplitude tracking.
Low Equivalent SWR.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Power Sensitivity: < 0.005 dB/dB/W; Unidirectional.

Power Rating: **1 W** average to 25°C ambient temperature. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle), Input connector only. **1 W** maximum input power.

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Phase Tracking: ±2° nominal between output ports.

Insertion Loss: 6 dB (nominal), 7.5 dB (maximum).

Maximum Balance of Power Division:

DC - 8.0	0.15 dB
8.0 - 2.0	0.20 dB
Typical	0.1 dB

VSWR (both output port terminated in 50 ohms):

Frequency (GHz)	VSWR
DC - 18.0	1.30

Equivalent Output Wave SWR:

Frequency (GHz)	VSWR
DC - 2.0	1.05
2.0 - 4.0	1.07
4.0 - 8.0	1.10
8.0 - 18.0	1.25

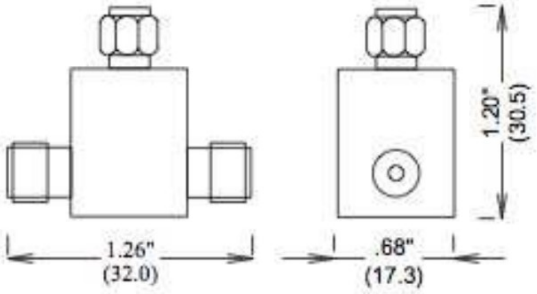
Dimensions:

Weight:	0.17 (6.00)
Length:	68.60 (2.70)
Width:	17.30 (0.68)
Height:	47.00 (1.85)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1507R

DC - 4.0 GHz **1 WATT**



Features

Male SMA port 1, female SMA ports 2 and 3. All ports-mate nondestructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz

Power Sensitivity: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **1 W** average to 25°C ambient temperature, de-rated linearly to 0.1 W at 125° C. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle), Input connector only.

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body; stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 6.5 dB (maximum).

Amplitude Tracking: < 0.15 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 4.0	1.15	1.20

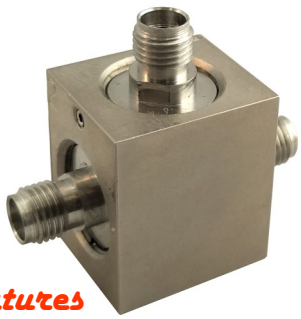
Dimensions:

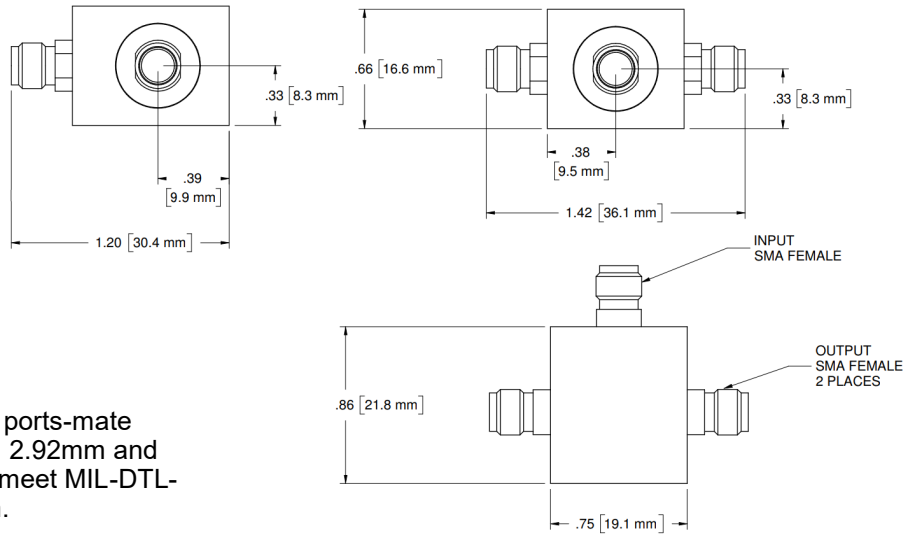
Weight:	0.05 (1.76)
Length:	34.54 (1.36)
Width:	17.27 (0.68)
Height:	30.48 (1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1507R-1

DC - 4.0 GHz **1 WATT**





Features

Female SMA port 1, 2, and 3; all ports-mate nondestructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz

Power Sensitivity: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **1 W** average to 25°C ambient temperature, de-rated linearly to 0.1 W at 125° C. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle), Input connector only.

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body, stainless steel connectors. Gold plated beryllium copper contacts. RoHS Compliant

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 6.5 dB (maximum).

Amplitude Tracking: < 0.15 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 4.0	1.15	1.20

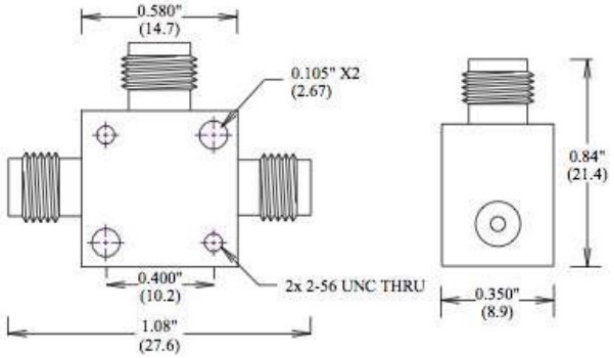
Dimensions:

Weight:	0.05 (1.76)
Length:	34.54 (1.36)
Width:	17.27 (0.68)
Height:	30.48 (1.20)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1593

DC - 26.5 GHz **1 WATT**



Features

Female 3.5mm port 1, 2, and 3; all ports -mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Optional female 3.5mm connectors are available on all ports. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz

Power Sensitivity: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **1 W** average to 25°C ambient temperature. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle), Input connector only.

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body, stainless steel connectors, gold plated beryllium copper contacts, and through-holes provided for mounting. RoHS Compliant.

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 8.5 dB (maximum).

Amplitude Tracking: < 0.25 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 26.5	1.35	1.40

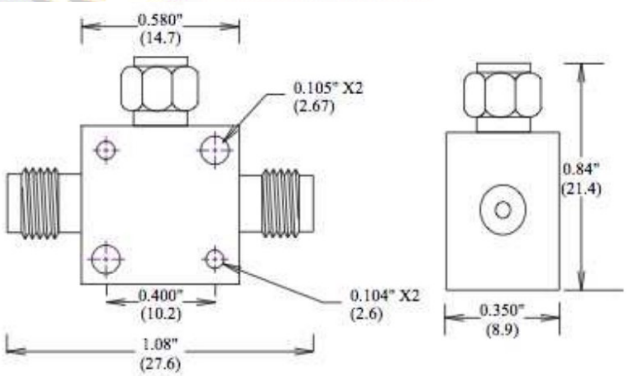
Dimensions:

Weight:	0.01 (6.00)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1593-2

DC - 26.5 GHz **1 WATT**



Features

Male 3.5mm port 1, (2) female 3.5mm ports 2 and 3; all ports -mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Optional female 3.5mm connectors are available on all ports. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz

Power Sensitivity: < 0.005 dB/dB/W; Unidirectional in power.

Power Rating: **1 W** average to 25°C ambient temperature. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle), Input connector only.

Temperature Range: -55°C to +85°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Nickel plated brass body, stainless steel connectors, gold plated beryllium copper contacts, and through-holes provided for mounting. RoHS Compliant.

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 8.5 dB (maximum).

Amplitude Tracking: < 0.25 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 26.5	1.35	1.40

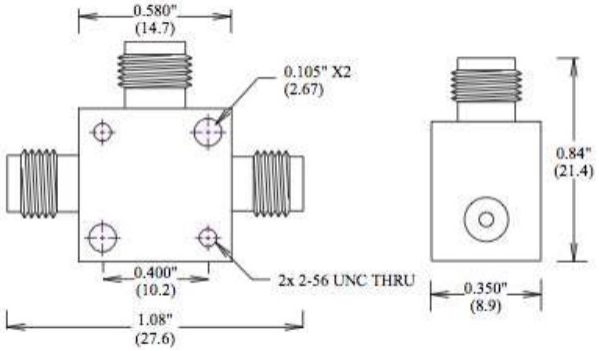
Dimensions:

Weight:	0.01 (6.00)
Length:	29.00 (1.14)
Width:	9.00 (0.35)
Height:	22.00 (0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1534

DC - 40.0 GHz **1 WATT**



Features

Female precision 2.92 mm ports 1, 2, and 3; all ports -mate non-destructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Power Rating: **1 W** average to 25°C ambient temperature. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle, Input connector only).

Temperature Range: -55°C to +125°C.

Construction: Nickel plated brass body, stainless steel connectors, gold plated beryllium copper contacts, and through-holes provided for mounting. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost .

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 10.5 dB (maximum).

Amplitude Tracking: < 0.5 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 40.0	1.70	1.60

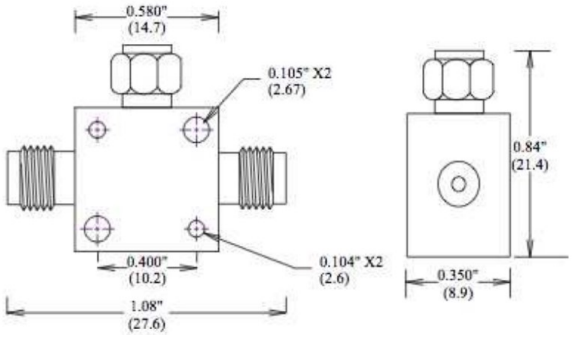
Dimensions and Weight:

Weight:	0.01 (6.00)
Length:	28.91 (1.14)
Width:	8.89(0.35)
Height:	21.83(0.87)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Broadband Resistive Power Splitter WA1534-2

DC - 40.0 GHz **1 WATT**



Features

Male precision 2.92 mm port 1, (2) Female precision 2.92 mm ports 2 and 3; all ports-mate nondestructively with other SMA, 2.92mm and 3.5mm connectors. Designed to meet MIL-DTL-3933 environmental specification.

Unit may be mounted in any position.

Features a lightweight miniature package with high power capability.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Power Rating: **1 W** average to 25°C ambient temperature. **1 kW** peak (5 µsec pulse width, 0.05% duty cycle, Input connector only).

Temperature Range: -55°C to +125°C.

Construction: Nickel plated brass body, stainless steel connectors, gold plated beryllium copper contacts, and through-holes provided for mounting. RoHS Compliant.

Calibration: VSWR performed across frequency range. Calibration test data available at additional cost.

Phase Tracking: < 4°

Insertion Loss: 6 dB (nominal), 10.5 dB (maximum).

Amplitude Tracking: < 0.5 dB

Maximum VSWR:

Frequency (GHz)	Output VSWR	Input VSWR
DC - 40.0	1.70	1.60

Dimensions:

Weight:	()
Length:	27.6 (1.08)
Width:	8.90(0.35)
Height:	21.4(0.84)

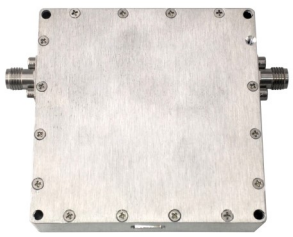
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

VARIABLE ATTENUATORS

DC – 40.0 GHz **0.3—5 WATTS**

Continuously Variable Attenuators							
Model Number	Frequency Range (GHz)	Average Power (W)	Peak Power (kW)	Residual Insertion Loss (dB)	Attenuation Range (dB)	Connectors and Mounting Notes	Page No.
VA-02-30	DC - 2	5	0.5	3	30	N, SMA	162
VA-02-60	DC - 2	5	0.5	5	60	N, SMA	162
VA-02-90	DC - 2	5	0.5	5	90	N, SMA	162
VA-02-100	DC - 2	5	0.5	5	100	N, SMA	162
VA-02-115	DC - 2	5	0.5	5	115	N, SMA	162
VA-03-30	DC - 3	5	0.5	3	30	N, SMA	162
VA-03-60	DC - 3	5	0.5	5	60	N, SMA	162
VA-03-90	DC - 3	5	0.5	5	90	N, SMA	162
VA-04-30	DC - 4	5	0.5	3	30	N, SMA	162
VA-04-60	DC - 4	5	0.5	5	60	N, SMA	162
VA-04-90	DC - 4	5	0.5	5	90	N, SMA	162
VA-05-60	DC - 5	5	0.5	5	60	N, SMA	162

Programmable Step Attenuators						
Model Number	Frequency Range	Average Power (W)	Peak Power (dBm)	Attenuation Range (dB)	Connectors and Mounting Notes	Page No.
DA6-60	DC - 6	0.3	+22 dBm	60	SMA	163
DA6-90	DC - 6	0.3	+22 dBm	90	SMA	163
DA13-60	DC - 13	0.3	+22 dBm	60	SMA	163
DA13-90	DC - 13	0.3	+22 dBm	90	SMA	163



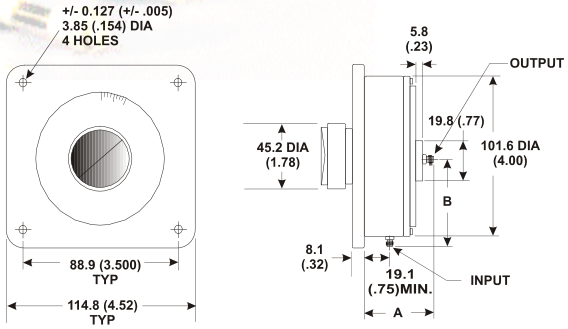
* Other configurations are available

Custom solutions at “off-the-shelf” prices

Variable Attenuator VA02-VA05

VA02: DC - 2.0 GHz
VA03: DC - 3.0 GHz
VA04: DC - 4.0 GHz
VA05: DC - 5.0 GHz

5 WATTS



Features

SMA and Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification. Features wide attenuation range, low residual insertion loss, and a long life.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: VA02: DC - 2.0 GHz.
VA03: DC - 3.0 GHz.
VA04: DC - 4.0 GHz.
VA05: DC - 5.0 GHz.

Power Sensitivity: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5 W** maximum rated average power to 40°C ambient temperature, de-rated linearly to 0 W at 85°C **500 W** peak power (5 µsec pulse width, 0.5% duty cycle).

Temperature Range:
Operating: 0°C to +85°C
Non-Operating: -55°C to +125°C

Temperature Coefficient: < 0.001 dB/dB/°C.

Construction: Stainless steel connectors, rugged construction, O-ring seal for faceplate. RoHS Compliant.

Calibration: Dial Calibrated in 1 dB increments at the mid-band frequency.

Rugged Construction: Designed and tested to meet the environmental requirements of MIL-DTL-24215.

Accuracy: ± 0.25 dB or 0.4% at mid-band

Attenuation Range:
VA02: 30, 60, 90, or 115 dB
VA03: 30, 60, or 90 dB
VA04: 30, 60, or 90 dB
VA05: 60 dB

Resolution:

30 dB	~120°
60 dB	~180°
90 dB	~240°
100 dB	~270°
115 dB	~285°

Options: Rack Mount Kit, Bench Top Stand

Frequency (GHz)	VSWR (Max)			
	VA02	VA03	VA04	VA05
DC - 1.0	1.50	1.50	1.50	1.50
1.0 - 2.0	1.60	1.60	1.60	1.60
2.0 - 3.0	N/A	1.70	1.70	1.70
3.0 - 5.0	N/A	N/A	1.80	1.80

Attenuation Ranges	Insertion Loss (dB), Nominal			
	VA02	VA03	VA04	VA05
30 dB	3	3	3	N/A
Other	5	5	5	5

Dimensions:

Connector Option	DIM "A" mm (in.)	DIM "B" mm (in.)
-34	66.0 (2.6)	68.1 (2.68)
-44	66.0 (2.6)	71.9 (2.83)
-33	61.0 (2.4)	68.1 (2.68)
-12	55.6 (2.19)	58.2 (2.29)
-22	55.6 (2.19)	61.5 (2.42)
-11	52.3 (2.06)	58.2 (2.29)

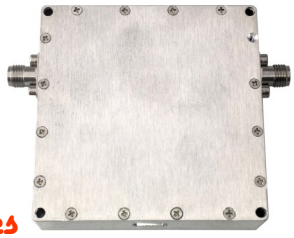
Weight: 1.13 (39.86)

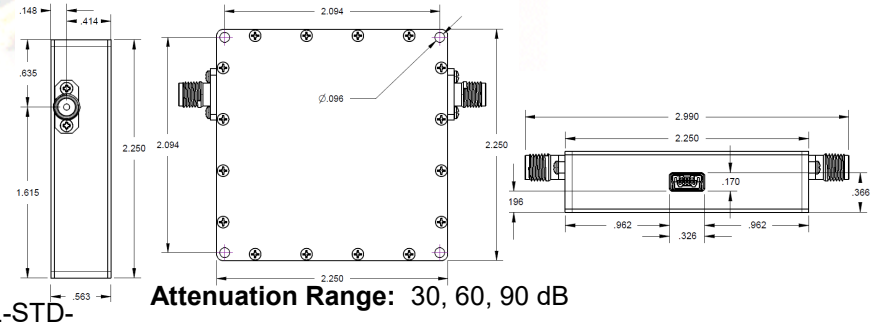
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

Variable Attenuator DA6 & DA13

DA6: DC - 6.0 GHz
DA13: DC - 13.0 GHz

0.3 WATTS





Features

SMA stainless steel connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-C-39012. Thru-holes for mounting. Designed to meet MIL-DTL-3933 environmental specification.

Broadband frequency coverage. High accuracy and repeatability. Control surface provided. USB interface.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DA6: DC - 6.0 GHz.
DA13: DC - 13.0 GHz.

Power Rating: **0.3 W** maximum rated average power to 25°C ambient temperature (Bidirectional).

Temperature Range:
Operating: -55°C to +85°C
Non-Operating: -60°C to +125°C

Construction: RoHS Compliant

Switching Speed: 100 ns

Step Size: 0.5

Input Power: +22 dBm

Input Third Order Intercept Point: +32 dBm

Programming Interface Options: USB 2.0

Input Power Requirements: Powered via USB

Accuracy: ± 0.5 Db

Attenuation Range: 30, 60, 90 dB

Maximum VSWR: DA6: 1.50
DA13: 1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)	
	DA6-60	DA6-90
DC - 4.0	7.0	11.0
4.0 - 6.0	9.0	13.0

Frequency (GHz)	Insertion Loss (dB)	
	DA13-60	DA13-90
DC - 4.0	8.0	12.0
4.0 - 8.0	10.0	15.0
8.0 - 13.0	12.0	18.0

Programming Interface:
Options: USB-2.0 (standard)
(Mini-USB Connector)
RS-232
802.11g Wireless
Manual Control
Software: LabView Driver
Standalone Program

Input Power Requirement: Powered via USB
Options: AC Power Adapter
EMI Feed thru

Dimensions and Weight:
Length: 57.2 (2.25)
Depth: 14.2 (0.56)
Height: 57.2 (2.25)
Weight: 76.5 (2.7) MAX

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION RF ADAPTERS
IN-SERIES AND BETWEEN SERIES

DC - 50.0 GHz

In-Series Precision RF Adapters				
Model Number	Connectors	Frequency Range DC - (GHz)	VSWR (max)	Page No.
WA1513-0303	N (f) - N (f)	18	1.15	167
WA1513-0404	N (m) - N (m)	18	1.15	167
WA1513-0304	N (f) - N (m)	18	1.15	167
WA1514/12-0505	TNC (f) - TNC (f)	12	1.15	168
WA1514/12-0506	TNC - (f) TNC (m)	12	1.15	168
WA1514/12-0606	TNC (m) - TNC (m)	12	1.15	168
WA1514-0505	TNC (f) - TNC (f)	18	1.15	168
WA1514-0506	TNC (f) - TNC (m)	18	1.15	168
WA1514-0606	TNC (m) - TNC (m)	18	1.15	168
WA1517-1919	BNC (f) - BNC (f)	4	1.20	170
WA1517-1920	BNC (f) - BNC (m)	4	1.20	170
WA1517-2020	BNC (m) - BNC (m)	4	1.20	170
WA1587-0101	SMA (f) - SMA (f)	27	1.20	174
WA1587-0102	SMA (f) - SMA (m)	27	1.20	174
WA1587-0202	SMA (m) - SMA (m)	27	1.20	174
WA7003-1111	3.5mm (f) - 3.5mm (f)	33	1.15	176
WA7003-1112	3.5mm (f) - 3.5mm (m)	33	1.15	176
WA7003-1212	3.5mm (m) - 3.5mm (m)	33	1.15	176
WA7004-1313	2.92mm (f) - 2.92mm (f)	40	1.25	177
WA7004-1314	2.92mm (f) - 2.92mm (m)	40	1.25	177
WA7004-1414	2.92mm (m) - 2.92mm (m)	40	1.25	177
WA7005-1515	2.4mm (f) - 2.4mm (f)	50	1.20	178
WA7005-1516	2.4mm (f) - 2.4mm (m)	50	1.20	178
WA7005-1616	2.4mm (m) - 2.4mm (f)	50	1.20	178
WA7015-1717	1.85mm (f) - 1.85mm (f)	65	1.25	187
WA7015-1718	1.85mm (f) - 1.85mm (m)	65	1.25	187
WA7015-1818	1.85mm (m) - 1.85mm (m)	65	1.25	187

PRECISION RF ADAPTERS
IN-SERIES AND BETWEEN SERIES

DC - 50.0 GHz

Between-Series Precision RF Adapters				
Model Number	Connectors	Frequency Range	VSWR (max)	Page No.
WA1516-0307	N (f) - 7/16 (f)	6	1.2	169
WA1516-0308	N (f) - 7/16 (m)	6	1.2	169
WA1516-0407	N (m) - 7/16 (f)	6	1.2	169
WA1516-0408	N (m) - 7/16 (m)	6	1.2	169
WA1548-0103	SMA (f) - N (f)	18	1.15	171
WA1548-0104	SMA (f) - N (m)	18	1.15	171
WA1548-0203	SMA (m) - N (f)	18	1.15	171
WA1548-0204	SMA (m) - N (m)	18	1.15	171
WA1550-0503	TNC (f) - N (f)	18	1.15	172
WA1550-0504	TNC (f) - N (m)	18	1.15	172
WA1550-0603	TNC (m) - N (f)	18	1.15	172
WA1550-0604	TNC (m) - N (m)	18	1.15	172
WA1551-0105	SMA (f) - TNC (f)	18	1.15	173
WA1551-0106	SMA (f) - TNC (m)	18	1.15	173
WA1551-0205	SMA (m) - TNC (f)	18	1.15	173
WA1551-0206	SMA (m) - TNC (m)	18	1.15	173
WA7002-0319	N (f) - BNC (f)	4	1.3	175
WA7002-0320	N (f) - BNC (m)	4	1.3	175
WA7002-0419	N (m) - BNC (f)	4	1.3	175
WA7002-0420	N (m) - BNC (m)	4	1.3	175
WA7002-0519	TNC (f) - BNC (f)	4	1.3	175
WA7002-0520	TNC (f) - BNC (m)	4	1.3	175
WA7002-0619	TNC (m) - BNC (f)	4	1.3	175
WA7002-0620	TNC (m) - BNC (m)	4	1.3	175
WA7006-1315	2.92mm (f) - 2.4mm (f)	40	1.25	179
WA7006-1316	2.92mm (f) - 2.4mm (m)	40	1.25	179
WA7006-1415	2.92mm (m) - 2.4mm (f)	40	1.25	179
WA7006-1416	2.92mm (m) - 2.4mm (m)	40	1.25	179
WA7007-1115	3.5mm (f) - 2.4mm (f)	33	1.15	180
WA7007-1116	3.5mm (f) 2.4mm (m)	33	1.15	180
WA7007-1215	3.5mm (m) - 2.4mm (f)	33	1.15	180
WA7007-1216	3.5mm (m) - 2.4mm (m)	33	1.15	180
WA7008-1103	3.5mm (f) - N (f)	18	1.15	181
WA7008-1104	3.5mm (f) - N (m)	18	1.15	181
WA7008-1203	3.5mm (m) - N (f)	18	1.15	181
WA7008-1204	3.5mm (m) - N (m)	18	1.15	181

PRECISION RF ADAPTERS
IN-SERIES AND BETWEEN SERIES

DC - 50.0 GHz

Between-Series Precision RF Adapters				
Model Number	Connectors	Frequency Range DC - (GHz)	VSWR (max)	Page No.
WA7009-1303	2.92mm (f) - N (f)	18	1.15	182
WA7009-1304	2.92mm (f) - N (m)	18	1.15	182
WA7009-1403	2.92mm (m) - N (f)	18	1.15	182
WA7009-1404	2.92mm (m) - N (m)	18	1.15	182
WA7010-1301	2.92mm (f) - SMA (f)	27	1.20	183
WA7010-1302	2.92mm (f) - SMA (m)	27	1.20	183
WA7010-1401	2.92mm (m) - SMA (f)	27	1.20	183
WA7010-1402	2.92mm (m) - SMA (m)	27	1.20	183
WA7012-1503	2.4mm (f) - N (f)	18	1.15	184
WA7012-1504	2.4mm (f) - N (m)	18	1.15	184
WA7012-1603	2.4mm (m) - N (f)	18	1.15	184
WA7012-1604	2.4mm (m) - N (m)	18	1.15	184
WA7013-1501	2.4mm (f) - SMA (f)	27	1.20	185
WA7013-1502	2.4mm (f) - SMA (m)	27	1.20	185
WA7013-1601	2.4mm (m) - SMA (f)	27	1.20	185
WA7013-1602	2.4mm (m) - SMA (m)	27	1.20	185
WA7014-1311	2.92mm (f) - 3.5mm (f)	33	1.15	186
WA7014-1312	2.92mm (f) - 3.5mm (m)	33	1.15	186
WA7014-1411	2.92mm (m) - 3.5mm (f)	33	1.15	186
WA7014-1412	2.92mm (m) - 3.5mm (m)	33	1.15	186
WA7017-1317	2.92mm (f) - 1.85mm (f)	40	1.25	188
WA7017-1318	2.92mm (f) - 1.85mm (m)	40	1.25	188
WA7017-1417	2.92mm (m) - 1.85mm (f)	40	1.25	188
WA7017-1418	2.92mm (m) - 1.85mm (m)	40	1.25	188
WA7018-0111	SMA (f) - 3.5mm (f))	27	1.20	189
WA7018-0112	SMA (f) - 3.5mm (m)	27	1.20	189
WA7018-0211	SMA (m) - 3.5mm (f)	27	1.20	189
WA7018-0212	SMA (m) - 3.5mm (m)	27	1.20	189
WA7019-1117	3.5mm (f) - 1.85mm (f)	33	1.25	190
WA7019-1118	3.5mm (f) - 1.85mm (m	33	1.25	190
WA7019-1217	3.5mm (m) - 1.85mm (f)	33	1.25	190
WA7019-1218	3.5mm (m) - 1.85mm (m)	33	1.25	190

TEL: 877.948.8342 / 301.963.4630 ♦ Fax: 301.963.8640
WEB: http://www.WeinschelAssociates.com
EMAIL: sales@WeinschelAssociates.com

Precision Coaxial Adapter

WA1513

DC – 18.0 GHz

Type N to Type N

Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +100°C.

Construction: Passivated stainless steel body and gold plated beryllium copper contacts. RoHS Compliant

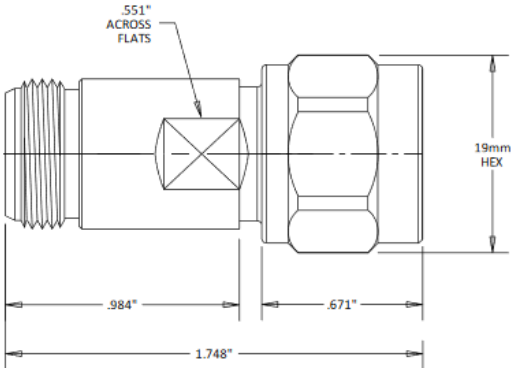
Options: Bulkhead Mount, Flange Mount, Right Angle

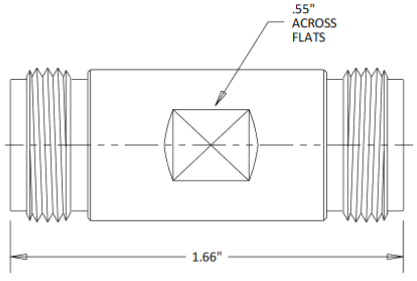
Maximum VSWR:

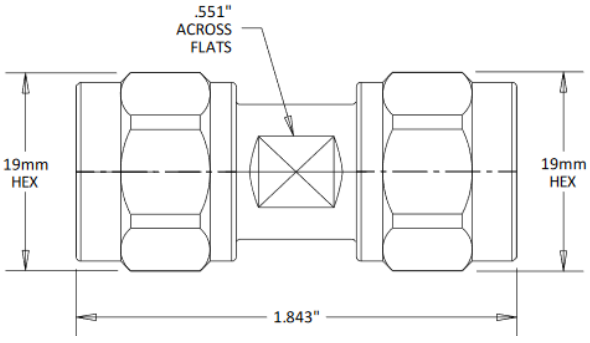
Frequency (GHz)	VSWR
	WA1513
DC - 18.0	1.15

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.







Precision Coaxial Adapter

WA1514

WA1514/12: DC – 12.4 GHz
WA1514: DC – 18.0 GHz

TNC to TNC

Features

TNC stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA1514: DC - 18.0 GHz
WA1514/12: DC - 12.4 GHz

Temperature Range: WA1514: -55°C to +100°C.
WA1514/12: -55°C to +125°C.

Construction: Passivated stainless steel body and gold plated beryllium copper contacts. RoHS Compliant.

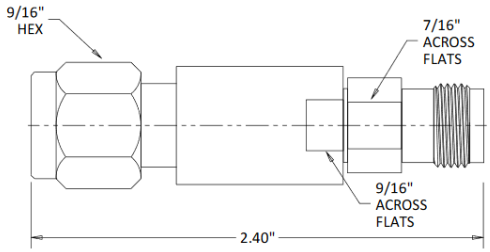
Maximum VSWR:

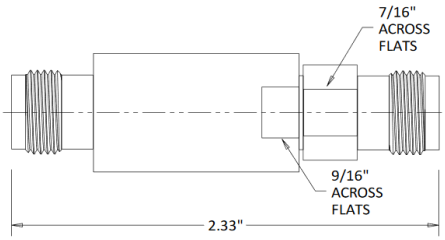
Frequency (GHz)	VSWR	
	WA1514	WA1514/12
DC - 12.4	1.15	1.15
12.4 - 18.0	1.15	N/A

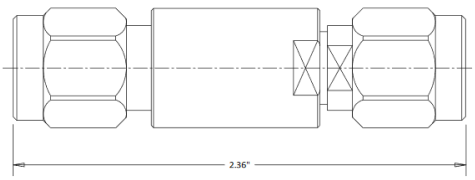
Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss	
	WA1514	WA1514/12
DC - 12.4	0.25	0.25
12.4 - 18.0	0.25	N/A

Dimensions:
Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.







Precision Coaxial Adapter

WA1516

DC – 6 GHz

Type N to 7/16 DIN

Features

Type N and 7/16 DIN stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 6 GHz

Temperature Range: -55°C to +125°C

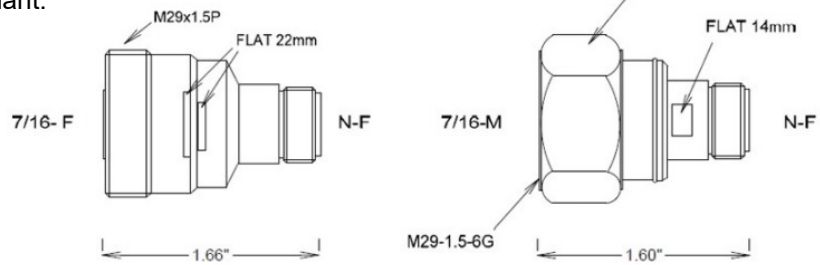
Construction: Passivated stainless steel body and gold plated beryllium copper contacts. RoHS Compliant.

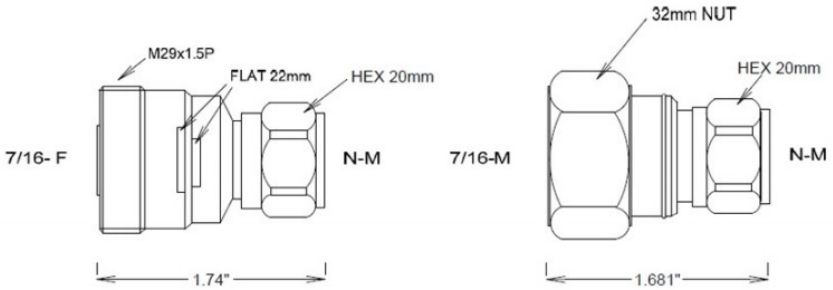
Maximum VSWR:

Frequency (GHz)	VSWR
	WA1516
DC - 6 GHz	1.2

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





Precision Coaxial Adapter

WA1517

DC – 4.0 GHz

BNC to BNC

Features

BNC brass M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz

Temperature Range: -55°C to +120°C

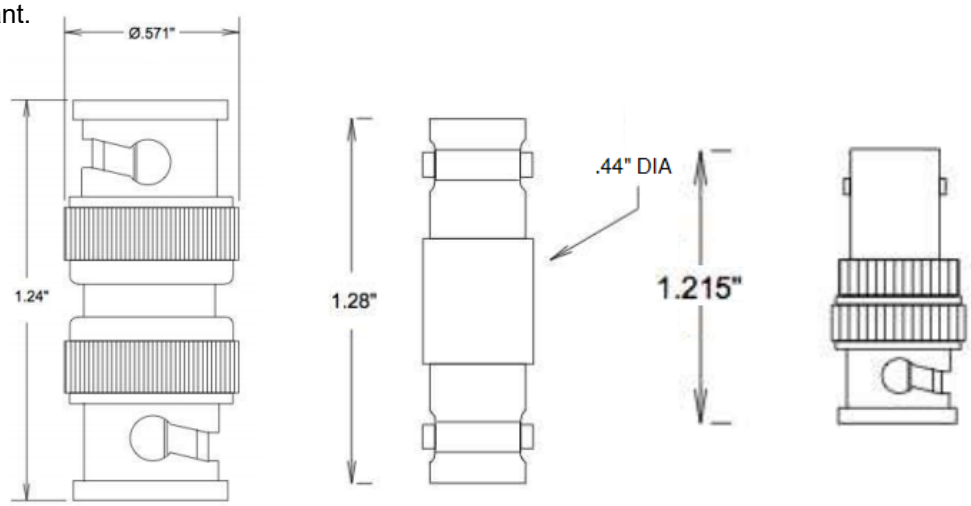
Construction: Nickel plated brass body and gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1517
DC - 4.0	1.20

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Precision Coaxial Adapter

WA1548

DC – 18.0 GHz

SMA to Type N

Features

Type N and SMA M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Coupling Torque 14 in-lbs for N type and 8 in-lbs for SMA. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +100°C

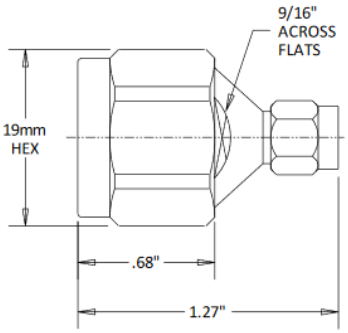
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

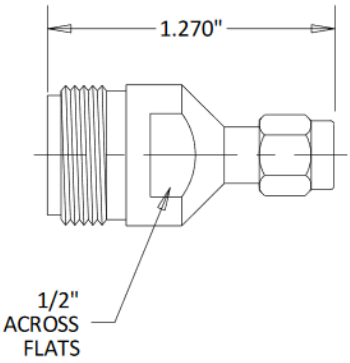
Maximum VSWR:

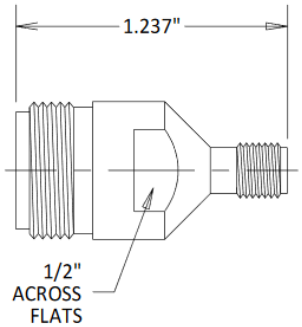
Frequency (GHz)	VSWR
	WA1548
DC - 18.0	1.15

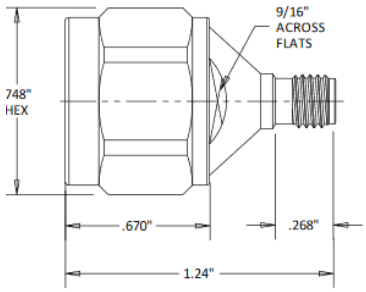
Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA1550

DC – 18.0 GHz

TNC to Type N

Features

TNC and Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +125°C

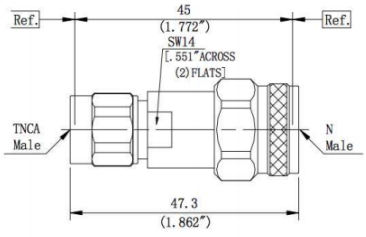
Construction: Stainless steel bodies, stainless steel coupling nuts, and gold plated beryllium copper contacts. RoHS Compliant

Maximum VSWR:

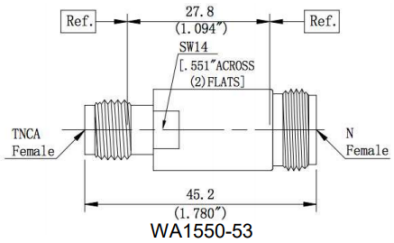
Frequency (GHz)	VSWR
	WA1550
DC - 18.0	1.15

Dimensions:

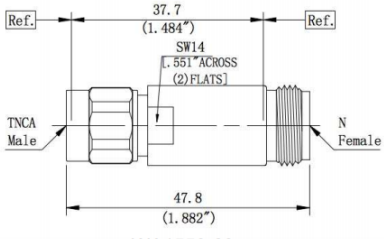
Note: Dimensions are given in mm (in) otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



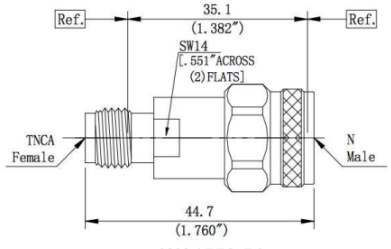
WA1550-64



WA1550-53



WA1550-63



WA1550-54

Precision Coaxial Adapter

WA1551

DC – 18.0 GHz

SMA to TNC

Features

SMA and TNC M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +100°C

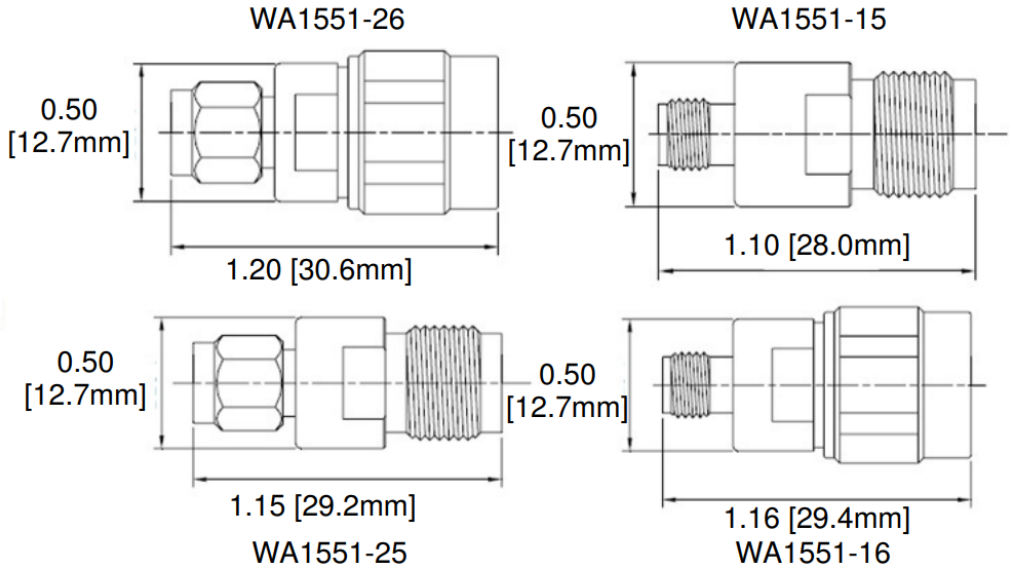
Construction: Stainless steel bodies, stainless steel coupling nuts, and gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR
	WA1551
DC - 18.0	1.15

Dimensions:

Note: Dimensions are given in inches (mm) unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



Precision Coaxial Adapter

WA1587

DC – 27.0 GHz

SMA to SMA

Features

SMA M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 27.0 GHz

Temperature Range: -55°C to +100°C

Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

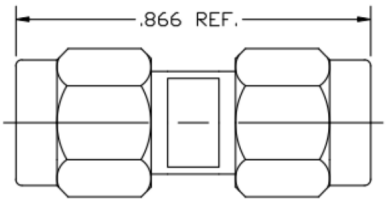
Options: Bulkhead Mount, Flange Mount, Right Angle, Swept 45 Degree Angle, Swept 90 Degree Angle.

Maximum VSWR:

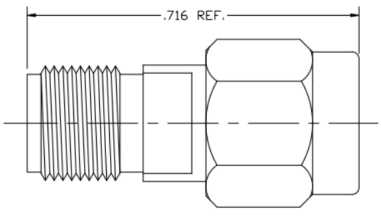
Frequency (GHz)	VSWR
	WA1587
DC - 18.0	1.20

Dimensions:

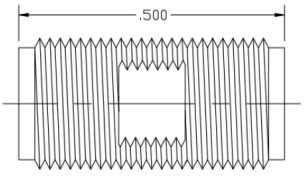
Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.



WA1587-22



WA1587-12



WA1587-11

Precision Coaxial Adapter

WA7002

DC – 4.0 GHz

Type N/TNC to BNC

Features

Type N or TNC M/F to BNC M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 4.0 GHz

Temperature Range: -55°C to +125°C

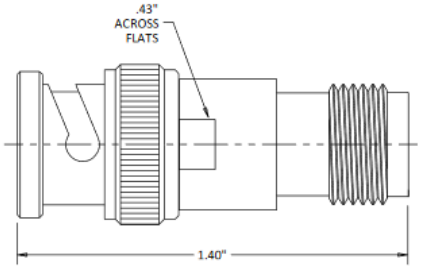
Construction: Passivated stainless steel body with nickel plated brass or stainless steel connectors. Gold plated beryllium contacts. RoHs compliant.

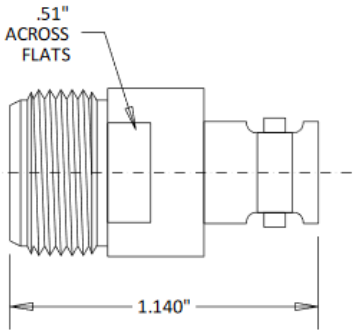
Maximum VSWR:

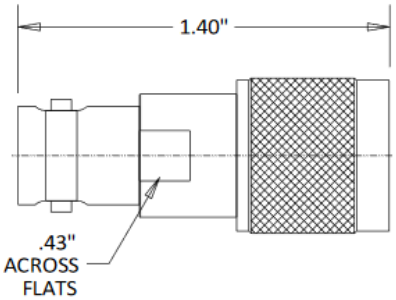
Frequency (GHz)	VSWR
	WA7002
DC - 4.0	1.3

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.







Precision Coaxial Adapter

WA7003

DC – 33.0 GHz

3.5 mm to 3.5 mm

Features

3.5 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 33.0 GHz

Temperature Range: -55°C to +100°C

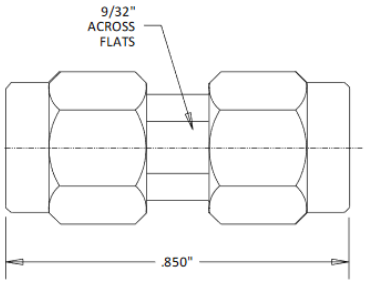
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

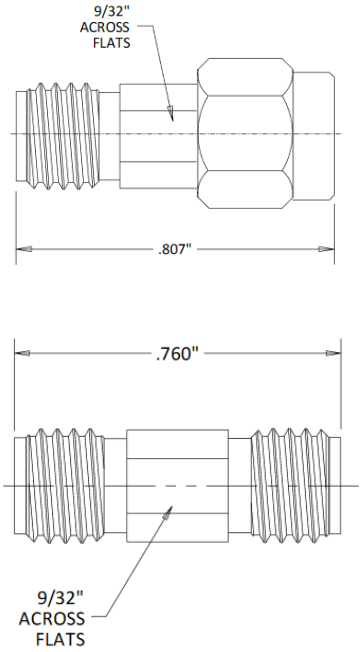
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7003
DC - 33.0	1.15

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





Precision Coaxial Adapter

WA7004

DC – 40.0 GHz

2.92 mm to 2.92 mm

Features

Precision 2.92 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Temperature Range: -55°C to +100°C

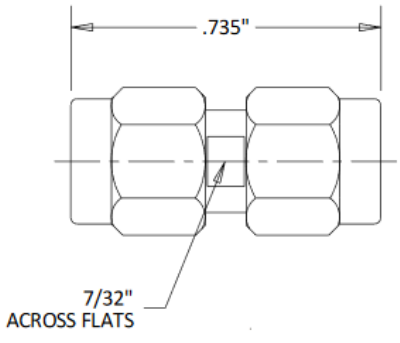
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant

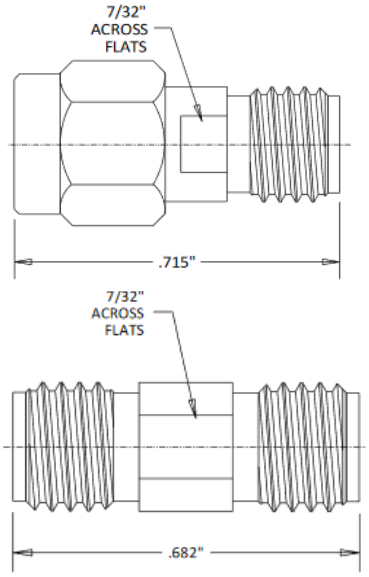
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7004
DC - 40.0	1.25

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





Precision Coaxial Adapter

WA7005

DC – 50.0 GHz

2.4 mm to 2.4 mm

Features

Precision 2.4 mm connectors M/F per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

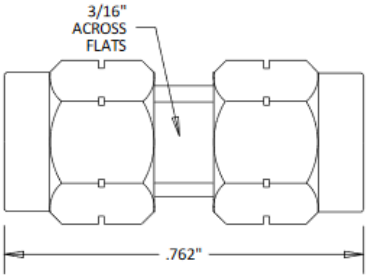
Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 50.0 GHz

Temperature Range: -55°C to +100°C

Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

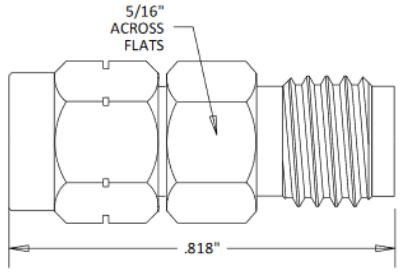


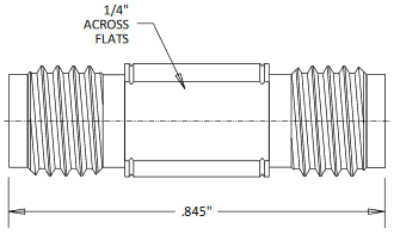
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7005
DC - 50.0	1.20

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





Precision Coaxial Adapter

WA7006

DC – 40.0 GHz

2.92 mm to 2.4 mm

Features

2.92 and 2.4 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Temperature Range: -55°C to +100°C

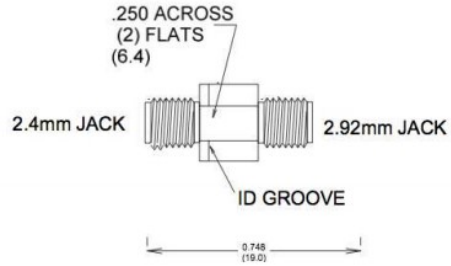
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

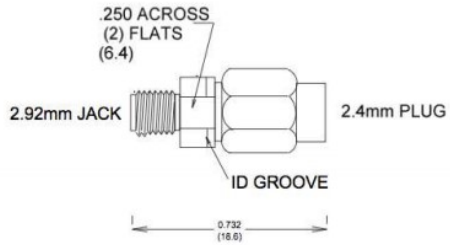
Maximum VSWR:

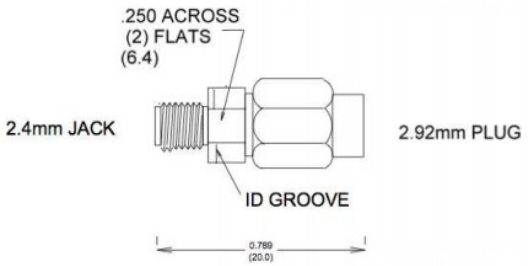
Frequency (GHz)	VSWR
	WA7006
DC - 40.0	1.25

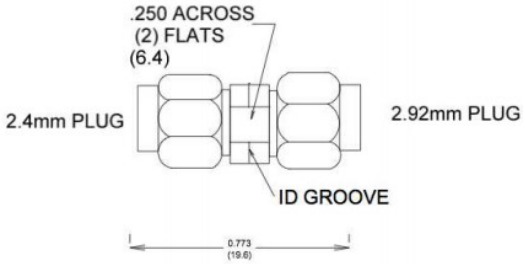
Dimensions:

Note: Dimensions are given in inches (mm) unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA7007

DC – 33.0 GHz

3.5 mm to 2.4 mm

Features

3.5 and 2.4 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 33.0 GHz

Temperature Range: -60°C to +165°C

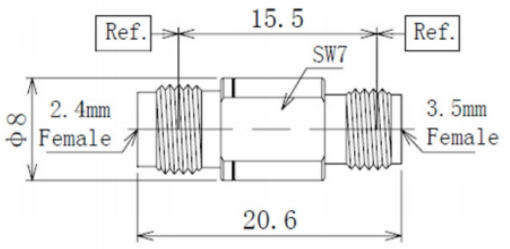
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

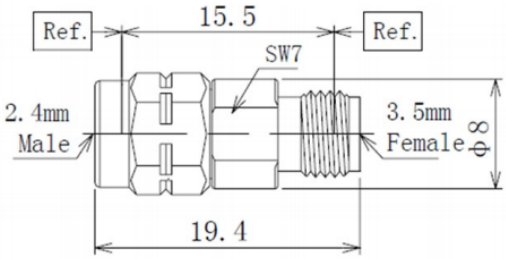
Maximum VSWR:

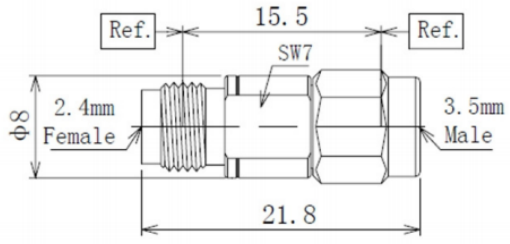
Frequency (GHz)	VSWR
	WA7007
DC - 33.0	1.15

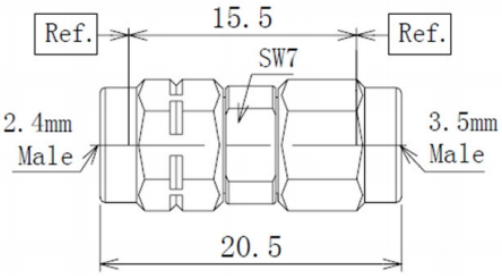
Dimensions:

Note: Dimensions are given in mm unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA7008

DC – 18.0 GHz

3.5 mm to Type N

Features

3.5 mm and Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -60°C to +165°C

Maximum Insertion Loss: 0.15 dB

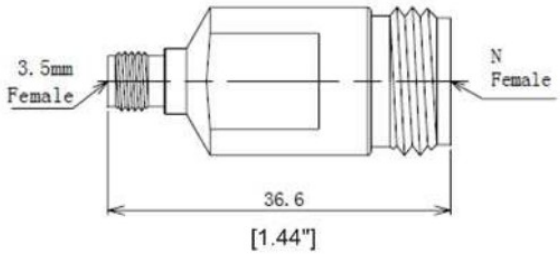
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

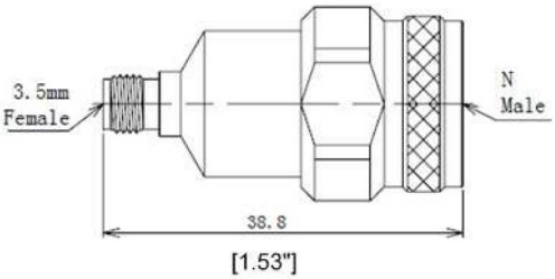
Maximum VSWR:

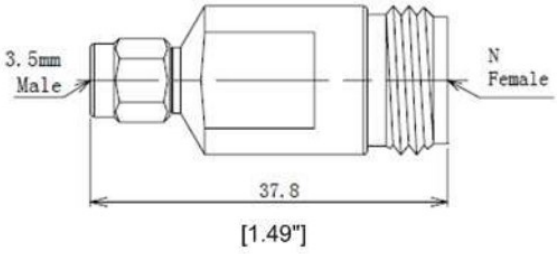
Frequency (GHz)	VSWR
	WA7008
DC - 18.0	1.15

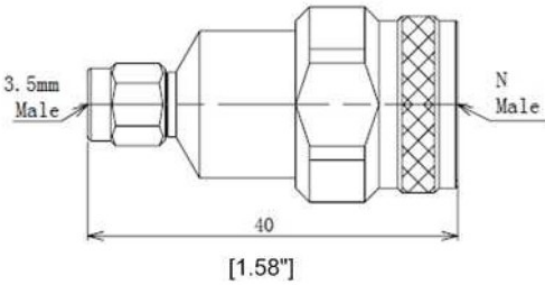
Dimensions:

Note: Dimensions are given in mm (in) unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









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Precision Coaxial Adapter

WA7009

DC – 18.0 GHz

2.92 mm to Type N

Features

2.92 mm and Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +100°C

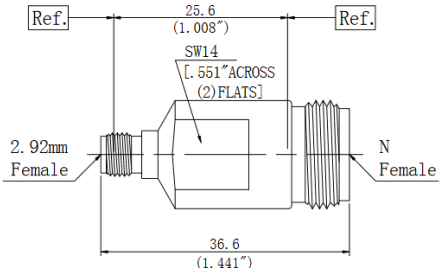
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

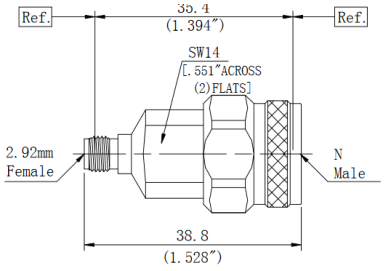
Maximum VSWR:

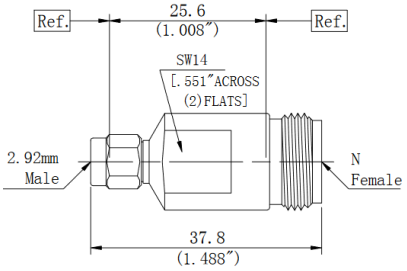
Frequency (GHz)	VSWR
	WA7009
DC - 18.0	1.15

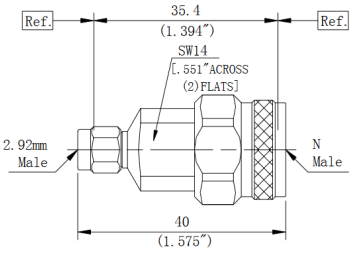
Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA7010

DC – 27.0 GHz

2.92 mm to SMA



Features

2.92 mm and SMA M/F connectors per MIL-STD -348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 27.0 GHz

Power: Up to 10 W

Temperature Range: -55°C to +100°C

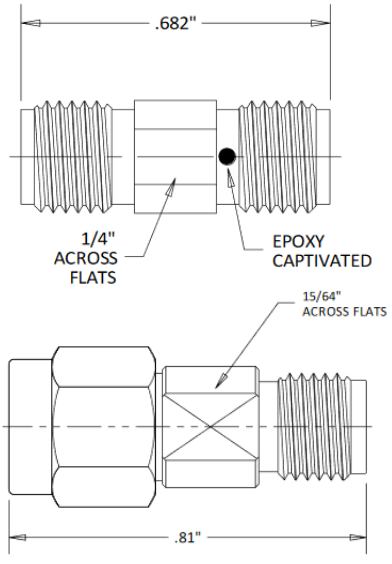
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

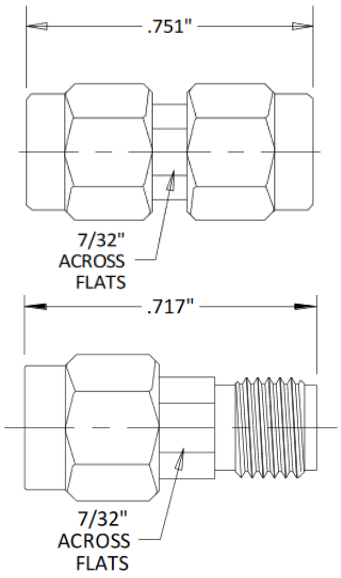
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7010
DC - 27.0	1.20

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





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Precision Coaxial Adapter

WA7012

DC –18.0 GHz

2.4 mm to Type N

Features

2.4 mm and Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz

Temperature Range: -55°C to +100°C

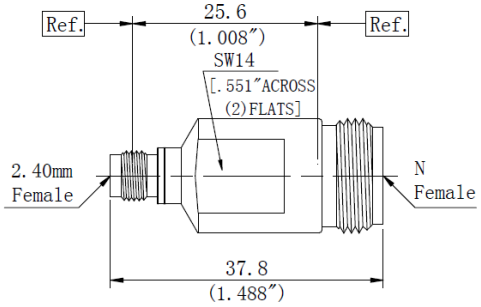
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

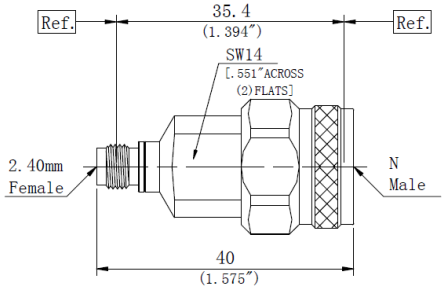
Maximum VSWR:

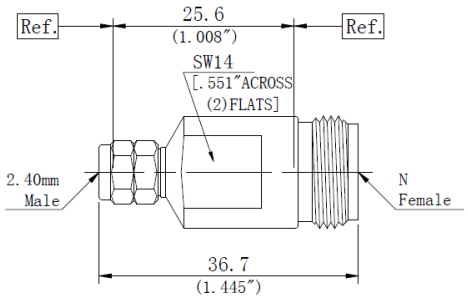
Frequency (GHz)	VSWR
	WA7012
DC - 18.0	1.15

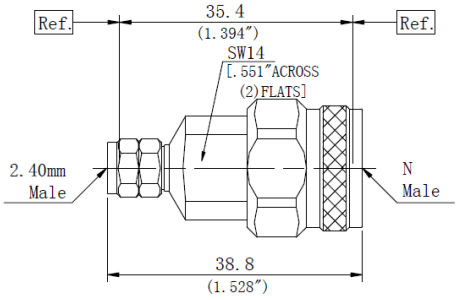
Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









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Precision Coaxial Adapter

WA7013

DC – 27.0 GHz

2.4 mm to SMA

Features

2.4 mm and Type N M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 27.0 GHz

Temperature Range: -55°C to +165°C

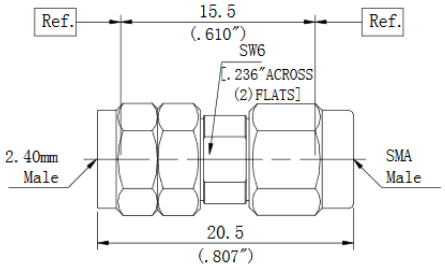
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

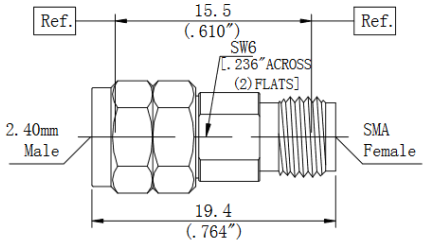
Maximum VSWR:

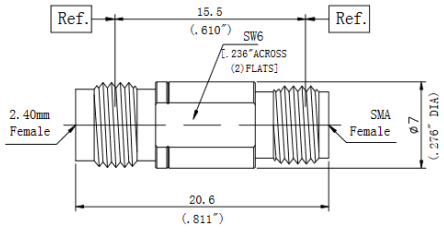
Frequency (GHz)	VSWR
	WA7013
DC - 27.0	1.15

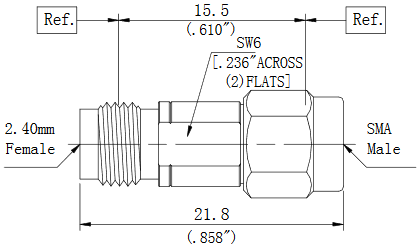
Dimensions:

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available









Precision Coaxial Adapter

WA7014

DC – 33.0 GHz

2.92 mm to 3.5 mm

Features

2.92 mm and 3.5 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 33.0 GHz

Temperature Range: -55°C to +165°C

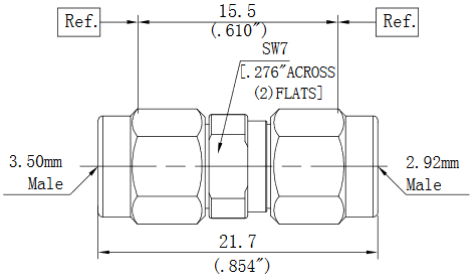
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

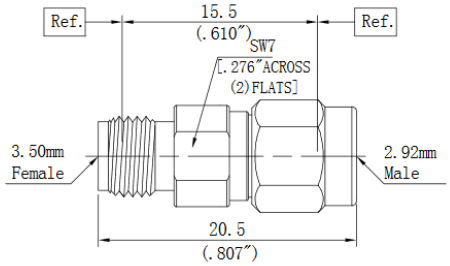
Maximum VSWR:

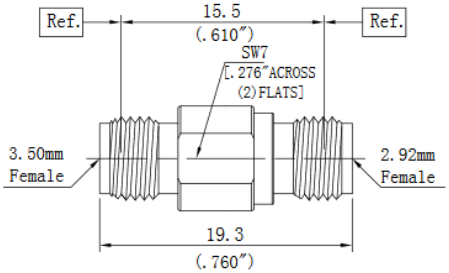
Frequency (GHz)	VSWR
	WA7014
DC - 33.0	1.15

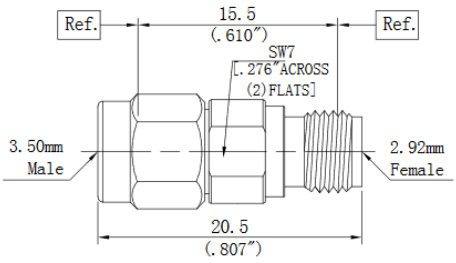
Dimensions:

Note: Dimensions are given in mm (in) unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA7015

DC – 65.0 GHz

1.85 mm to 1.85 mm

Features

Precision 1.85 mm M/F connectors per MIL-STD -348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 65.0 GHz

Temperature Range: -55°C to +165°C

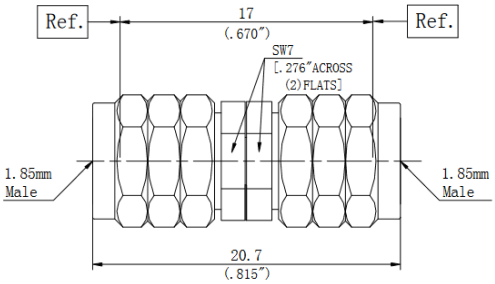
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

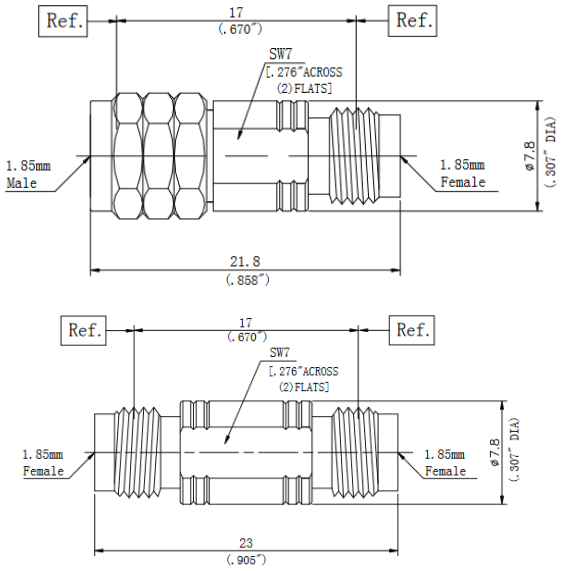
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7015
DC - 65.0	1.25

Dimensions:

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available





Precision Coaxial Adapter

WA7017

DC –40.0 GHz

2.92 mm to 1.85 mm

Features

2.92 mm and 1.85 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40.0 GHz

Temperature Range: -55°C to +165°C

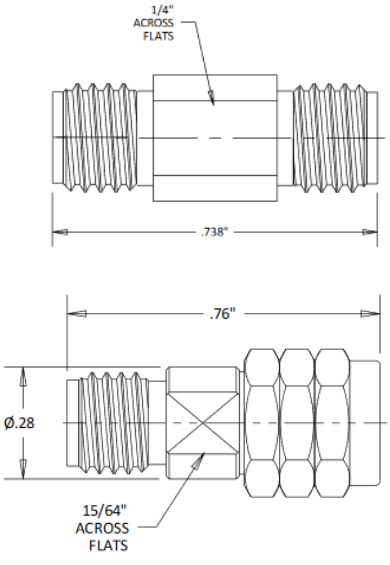
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

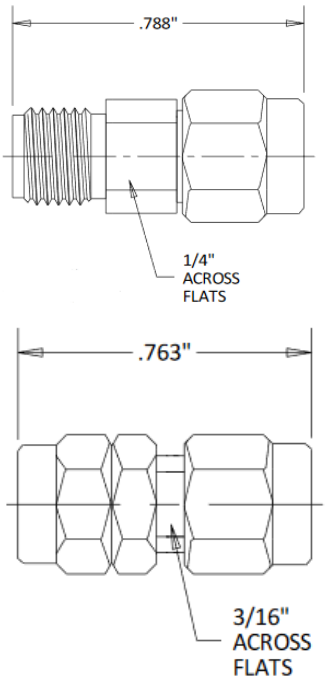
Maximum VSWR:

Frequency (GHz)	VSWR
	WA7017
DC - 40.0	1.25

Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.





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Precision Coaxial Adapter

WA7018

DC – 27.0 GHz

SMA to 3.5 mm

Features

SMA and 3.5 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 27.0 GHz

Temperature Range: -55°C to +165°C

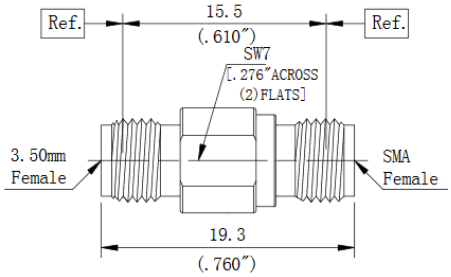
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

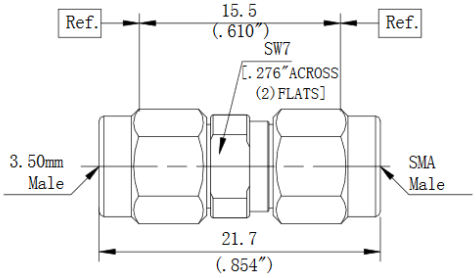
Maximum VSWR:

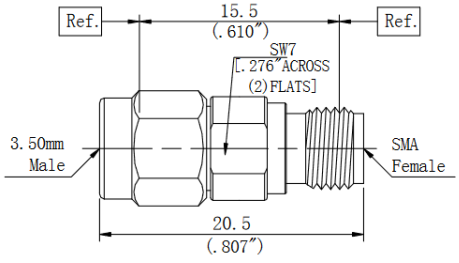
Frequency (GHz)	VSWR
	WA7018
DC - 27.0	1.15

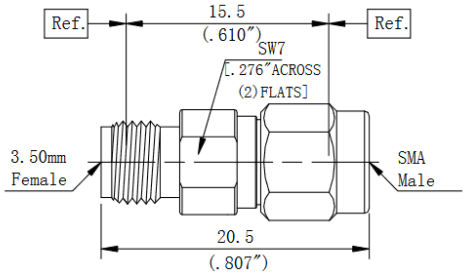
Dimensions:

Note: Dimensions are given in mm (in) unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









Precision Coaxial Adapter

WA7019

DC – 33.0 GHz

1.85 mm to 3.5 mm

Features

1.85 mm and 3.5 mm M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012 connectors. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 33.0 GHz

Temperature Range: -65°C to +85°C

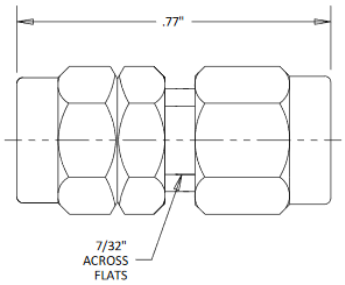
Construction: Stainless steel bodies and gold plated beryllium copper contacts. RoHS Compliant.

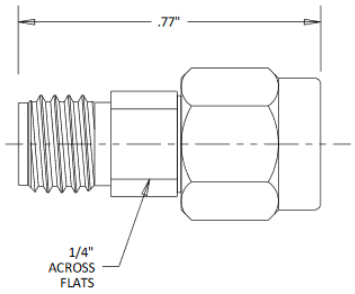
Maximum VSWR:

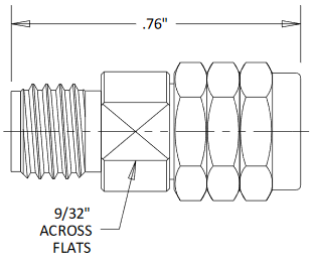
Frequency (GHz)	VSWR
	WA7019
DC - 33.0	1.25

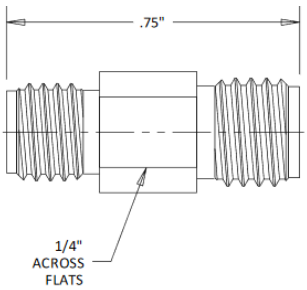
Dimensions:

Note: Dimensions are given in inches unless otherwise specified. Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.









PRECISION ATTENUATOR SETS

DC – 40.0 GHz **2– 5 WATTS**

Precision Coaxial Attenuator Sets							
Model Number	Frequency Range DC - (GHz)	Average Power (W)	Peak Power (kW)	Standard* Attenuation Values (dB)	Connectors	Attenuators Used	Page No.
WAS6	18	5	1	3,6,10,20	N	4 x WA2	198
WAS18	18	5	1	1,3,6,10,20,30	Precision N	6 x WA44	192
WAS19	26.5	2	0.5	3,6,10,20	SMA	4 x WA9	193
WAS20	40	2	0.2	3,6,10,20	2.92 mm	4 x WA54	194
WAS4	18	2	0.5	3,6,10,20	SMA	4 x WA4	195
WAS4C	18	2	0.25	3,6,10,20	SMA	4 x WA4C	196
WAS4M	18	2	0.5	3,6,10,20	SMA	4 x WA4M	197

* Other configurations are available

Features

Calibration Data: Attenuators are calibrated at 1 GHz intervals. Option 890 adds calibration data at 0.1 GHz and at 0.5 GHz intervals. DC Resistance values also provided.

Certificate of Calibration: Provided with each set, contains all calibration data.

Storage Case: Compact storage case organizes and protects the attenuators and their calibration data.

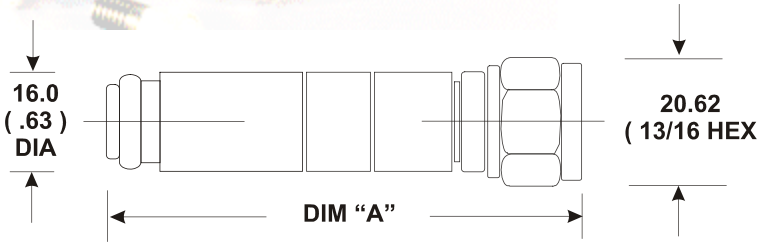
Custom Sets Available: Build your own set from our extensive offering of Fixed Coaxial Attenuators.

Custom solutions at "off-the-shelf" prices

PRECISION ATTENUATOR SET WAS18

1 Each WA44-1, WA44-3, WA44-6, WA44-10, WA44-20, WA44-30

DC – 18 GHz **5 WATTS**



Features

The model WAS18 comes complete with Certificate of Calibration and protective case for storing your attenuators. The WAS18 consists of 6 calibrated model WA44 attenuators at 1, 3, 6, 10, 20, and 30 dB. The following data for each attenuator are provided:

3 DC resistance values and insertion loss every 1.0 GHz from DC through 18.0 GHz.

✪ R.F Calibration Option -890 (42 frequencies) 100, 500, 1,000 and every 500 MHz to 16,000; 16,000 to 18,000 every 250 MHz.

Type N-type stainless steel M/F connectors per MIL-STD-348B, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz.

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **5W** average to 25°C ambient temperature, de-rated linearly to 0W at 125° C, **1kW** peak (5 µsec pulse width, 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value

Attenuation (dB)	Accuracy ± dB
	WA44
1, 3, 6	0.30
10, 20	0.50
30	1.00

Maximum VSWR:

Frequency (GHz)	VSWR
	WA44
DC - 4.0	1.15
4.0 - 12.4	1.20
12.4 - 18.0	1.25

Individual Dimensions:

Length (Dim "A"):	74.4 (2.93)
Diameter:	16.0 (.63)
Weight:	0.10 (3.5)

Case Dimensions: 10 ¾ in. (273 mm) long x 8 ½ in. (215.9 mm) wide x 2 ½ in. (63.5 mm) high.

Weight: Net 2 lb., 8 oz. (1.12 kg); Shipping weight, 3 lbs. (1.36 kg)

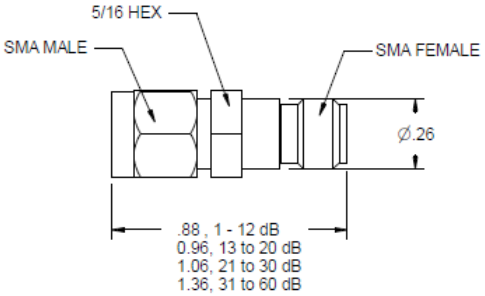
Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper or stainless steel contacts.

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION ATTENUATOR SET WAS19

1 Each WA9-3, WA9-6, WA9-10, WA9-20

DC - 26.5 GHz **2 WATTS**



Features

The model WAS19 comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS19 consists of 4 calibrated model WA9 attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 26.0 GHz.

✪ R.F Calibration Option -890 (42 frequencies) 100, 500, 1,000 and every 500 MHz to 16,000; 16,000 to 18,000 every 250 MHz.

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 26.5 GHz.

Nominal dB Values: 0 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 0.5W at 125° C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value

Attenuation (dB)	Accuracy ± dB
3	0.50
6	0.60
10	0.80
20	1.00

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35
18.0 - 26.5	1.50

Individual Dimensions:

Attenuation (dB)	WA9	
	Length	Weight
3, 6, 10	22.4 (.88)	3.9 (.14)
20	24.4 (.96)	4.3 (.15)

Body Diameter: 6.6 (.26)

Case Dimensions: 5 ½ in. (139.7 mm) long x 4 7/8 in. (123.8 mm) wide x 2 3/8 in. (60.3 mm) high.

Weight: Net 1 lb., 4 oz. (0.56 kg); Shipping weight, 2 lbs. 8 oz. (1.14 kg)

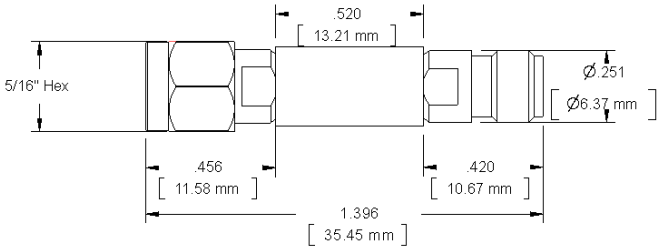
Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts.

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION ATTENUATOR SET WAS20

1 Each WA54-3, WA54-6, WA54-10, WA54-20

DC - 40 GHz **2 WATTS**



Features

The model WAS20 comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS20 consists of 4 calibrated model WA54 attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 40.0 GHz.

✪ R.F Calibration Option -890: 100, 500, 1,000 and every 500 MHz to 26,500; 26,500 to 40,000 every 250 MHz.

Precision 2.92mm stainless steel M/F connectors per MIS-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 40 GHz.

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 0.1W at 100° C, **200 W** peak (5 µsec pulse width, 0.5% duty cycle).

Temperature Range: -55°C to +100°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value:

Attenuation (dB)	Accuracy ± dB
3, 6, 10, 20	1.0

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 26.5	1.25
26.5 - 40.0	1.45

Individual Dimensions:

Length:	35.5 (1.40)
Body Diameter:	6.4 (.25)
Weight:	.008 (.28)

Case Dimensions: 5 ½ in. (139.7 mm) long x 4 7/8 in. (123.8 mm) wide x 2 3/8 in. (60.3 mm) high.

Weight: Net 1 lb., 4 oz. (0.56 kg); Shipping weight, 2 lbs. 8 oz. (1.14 kg)

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

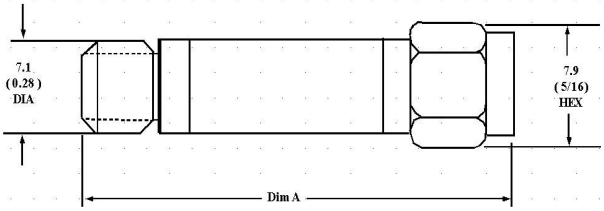
PRECISION ATTENUATOR SET

1 Each WA4-3, WA4-6, WA4-10, WA4-20

WAS4

DC – 18.0 GHz

2 WATTS



Features

The model WAS4 comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS4 consists of 4 calibrated model WA4 attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 18.0 GHz.

✪ R.F Calibration Option -890: 100, 500, 1,000 and every 500 MHz to 26,500; 26,500 to 40,000 every 250 MHz.

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value (including frequency sensitivity):

Attenuation (dB)	Accuracy ± dB
	WA4
3, 6	0.3
10	0.5
20	0.7

Maximum VSWR:

Frequency (GHz)	VSWR
	WA4
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Individual Dimensions:

Attenuation (dB)	WA4	
	Length (Dim "A")	Weight
3, 6, 10	31.2 (1.23)	3.9 (.14)
20	33.3 (1.31)	4.3 (.15)

Body Diameter: 7.1 (2.8)

Case Dimensions: 5 ½ in. (139.7 mm) long x 4 7/8 in. (123.8 mm) wide x 2 3/8 in. (60.3 mm) high.

Weight: Net 1 lb., 4 oz. (0.56 kg); Shipping weight, 2 lbs. 8 oz. (1.14 kg)

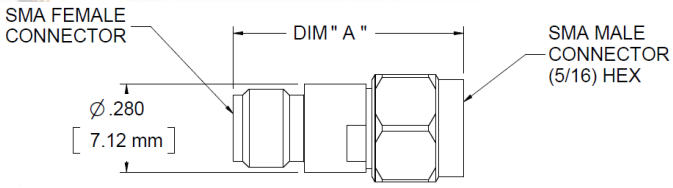
Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts, stainless steel male contacts. RoHS Compliant

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION ATTENUATOR SET WAS4C

1 Each WA4C-3, WA4C-6, WA4C-10, WA4C-20

DC – 18.0 GHz **2 WATTS**



Features

The model WAS4C comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS4C consists of 4 calibrated model WA4C attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 18.0 GHz.

✪ R.F Calibration Option -890: 100, 500, 1,000 and every 500 MHz to 26,500; 26,500 to 40,000 every 250 MHz.

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **250 W** peak (5µsec pulse width, 0.4% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value (including frequency sensitivity):

Attenuation (dB)	Accuracy ± dB
	WA4C
3, 6	0.3
10, 20	0.5

Maximum VSWR:

Frequency (GHz)	VSWR
	WA4C
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Individual Dimensions:

Attenuation (dB)	WA4C	
	Length (Dim "A')	Weight
3, 6, 10	19.3 (0.76)	3.9 (.14)
20	22.6 (0.89)	4.3 (.15)

Body Diameter: 7.12 (2.80)

Case Dimensions: 5 ½ in. (139.7 mm) long x 4 7/8 in. (123.8 mm) wide x 2 3/8 in. (60.3 mm) high.

Weight: Net 1 lb., 4 oz. (0.56 kg); Shipping weight, 2 lbs. 8 oz. (1.14 kg)

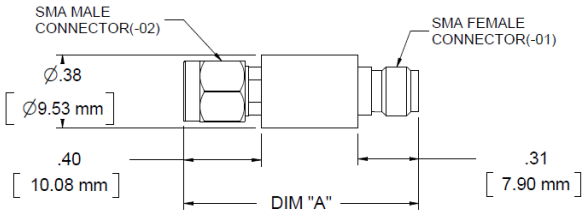
Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts, stainless steel male contacts. RoHS Compliant

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION ATTENUATOR SET WAS4M

1 Each WA4M-3, WA4M-6, WA4M-10, WA4M-20

DC – 18.0 GHz **2 WATTS**



Features

The model WAS4M comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS4M consists of 4 calibrated model WA4M attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 18.0 GHz.

✪ R.F Calibration Option -890: 100, 500, 1,000 and every 500 MHz to 26,500; 26,500 to 40,000 every 250 MHz.

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18.0 GHz.

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2 W** average to 25°C ambient temperature, de-rated linearly to 1.25 watts at 75°C and 0.5W at 125° C, **500 W** peak (5µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Maximum Deviation From Nominal Value (including frequency sensitivity):

Attenuation (dB)	Accuracy ± dB
	WA4M
3, 6, 10	0.5
20	0.7

Maximum VSWR:

Frequency (GHz)	VSWR
	WA4M
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Individual Dimensions:

Attenuation (dB)	WA4M	
	Length (Dim "A')	Weight
3, 6, 10	31.2 (1.23)	3.9 (.14)
20	33.3 (1.31)	4.3 (.15)

Body Diameter: 9.53 (0.38)

Case Dimensions: 5 ½ in. (139.7 mm) long x 4 7/8 in. (123.8 mm) wide x 2 3/8 in. (60.3 mm) high.

Weight: Net 1 lb., 4 oz. (0.56 kg); Shipping weight, 2 lbs. 8 oz. (1.14 kg)

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts, stainless steel male contacts. RoHS Compliant

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

PRECISION ATTENUATOR SET

1 Each WA2-3, WA2-6, WA2-10, WA2-20

WAS6

DC – 18.0 GHz

5 WATTS

Features

The model WAS6 comes complete with Certificate of Calibration and hardwood protective case for storing your attenuators. The WAS6 consists of 4 calibrated model WA2 attenuators, 3, 6, 10, and 20 dB. The following data for each attenuator are provided.

3 DC resistance values and insertion loss every 1.0 GHz from DC through 18.0 GHz. (18 frequencies)

✪ R.F Calibration Option -890 (42 frequencies) 100, 500, 1,000 and every 500 MHz to 16,000; 16,000 to 18,000 every 250 MHz.

These attenuators are designed to meet environmental tests of MIL-A-3933.

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Specifications

Nominal Impedance: 50 ohms.

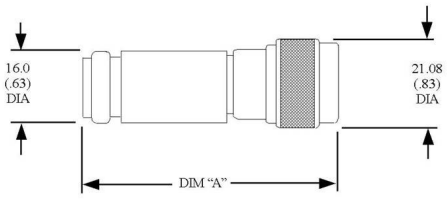
Frequency Range: DC - 18.0 GHz.

Power Coefficient: <0.005 dB/dB/W. Bidirectional in power.

Power Rating: **5 W** average. Maximum rated average power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C. **1 kW** peak (5 µsec pulse width; 0.25% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.



Maximum Deviation From Nominal Value (including frequency sensitivity):

Attenuation (dB)	Accuracy ± dB
	WA2
3, 6	0.3
10, 20	0.5

Maximum VSWR

Frequency (GHz)	VSWR
	WA2
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.40

Individual Dimensions:

Length (Dim "A):	57.2 (2.25)
Weight:	70 (2.6)
Diameter:	16 (0.63)

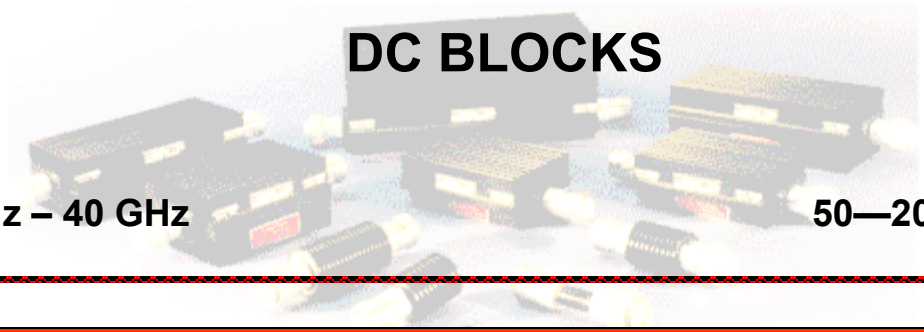
Case Dimensions: 4 ¾ in. (120.6 mm) long x 4 ½ in. (114.3 mm) wide x 2 ¾ in. (44.5 mm) high.

Weight: Net 1 lb., 13 oz. (0.82 kg); Shipping weight,
3 lbs. (1.36 kg)

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC BLOCKS



9 kHz – 40 GHz **50—200 VOLTS**

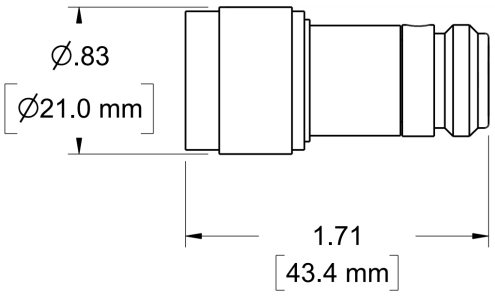
DC Blocks (Inner Only)						
Model Number	Frequency Range	Insertion Loss (dB, max)	VSWR (max)	Working Voltage (V)	Connectors	Page No.
WA6043	9 kHz to 18 GHz	0.9	1.35	50	N	200
WA6046/6	10 MHz to 6 GHz	0.8	1.4	50	N	201
WA6055H/6	10 MHz to 6 GHz	0.8	1.4	50	SMA	202
WA7046/6	10 MHz to 6 GHz	0.8	1.5	100	N	206
WA7055H/6	10 MHz to 6 GHz	0.8	1.4	100	SMA	207
WA8046/6	10 MHz to 6 GHz	0.8	1.4	200	N	208
WA8055H/6	10 MHz to 6 GHz	0.8	1.4	200	SMA	209
WA6046/12	10 MHz to 12.4 GHz	0.8	1.5	50	SMA	201
WA6055H/12	10 MHz to 12.4 GHz	0.8	1.5	50	SMA	202
WA7046/12	10 MHz to 12.4 GHz	0.8	1.5	100	SMA	206
WA7055H/12	10 MHz to 12.4 GHz	0.8	1.5	100	SMA	207
WA8046/12	10 MHz to 12.4 GHz	0.8	1.5	200	N	208
WA8055H/12	10 MHz to 12.4 GHz	0.8	1.5	200	SMA	209
WA6046	10 MHz to 18 GHz	0.8	1.5	50	N	201
WA6055H	10 MHz to 18 GHz	0.8	1.5	50	SMA	202
WA7046	10 MHz to 18 GHz	0.8	1.5	100	N	206
WA7055H	10 MHz to 18 GHz	0.8	1.5	100	SMA	207
WA8046	10 MHz to 18 GHz	0.8	1.5	200	N	208
WA8055H	10 MHz to 18 GHz	0.8	1.5	200	SMA	209
WA6055H/26	10 MHz to 26 GHz	1.0	1.55	50	SMA	202
WA6056H	9 kHz to 26.5 GHz	0.8	1.7	50	SMA	203
WA6057H	9 kHz to 30 GHz	1.0	1.7	50	3.5 mm	204
WA6058H	9 kHz to 40 GHz	1.0	1.7	50	2.92 mm	205

DC Blocks (Outer Only)						
Model Number	Frequency Range	Insertion Loss (dB, max)	VSWR (max)	Working Voltage (V)	Connectors	Page No.
WA8038	10 MHz to 18 GHz	0.5	1.35	200	SMA	211

DC Block (Inner/Outer)						
Model Number	Frequency Range	Insertion Loss (dB, max)	VSWR (max)	Working Voltage (V)	Connectors	Page No.
WA8039	10 MHz to 18 GHz	0.5	1.35	200	SMA	212

DC Block WA6043

9 kHz – 18.0 GHz **50 VOLTS**



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Low cut-in frequency, usable to 22 GHz.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 9 kHz - 18 GHz

Voltage: 50 volts

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature, de-rated linearly to 0.5 W at 125°C (Bidirectional). **100 W** peak power.

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency	VSWR
	WA6043
9 kHz - 11 kHz	1.50
11 kHz - 18 GHz	1.35

Maximum Insertion Loss:

Frequency	Insertion Loss (dB)
	WA6043
9 kHz - 18 GHz	0.9

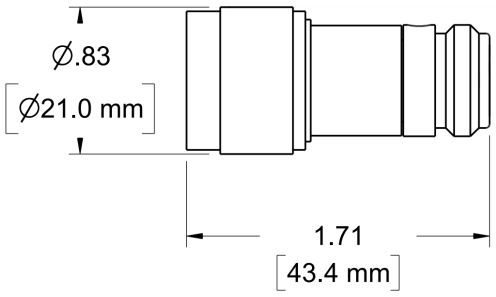
Dimensions:

Length:	43.4 (1.71)
Diameter:	21.0 (0.83)
Weight:	70 (2.6)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA6046

WA6046/6: 10 MHz – 6.0 GHz
WA6046/12: 10 MHz – 12.4 GHz
WA6046: 10 MHz – 18.0 GHz **50 VOLTS**



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner only– 6.0/12.4/18.0 GHz N-Type DC Block.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA6046: 10 MHz - 18.0 GHz.
WA6046/6: 10 MHz - 6.0 GHz.
WA6046/12: 10 MHz - 12.4 GHz.

Voltage: 50 volts

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature (Bidirectional).

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA6046	WA6046/6	WA6046/12
0.01 - 1.0	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)		
	WA6046	WA6046/6	WA6046/12
0.01 - 1.0	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80

Dimensions and Weight:

Length:	43.4 (1.71)
Diameter:	21.0 (0.83)
Weight:	70 (2.6)

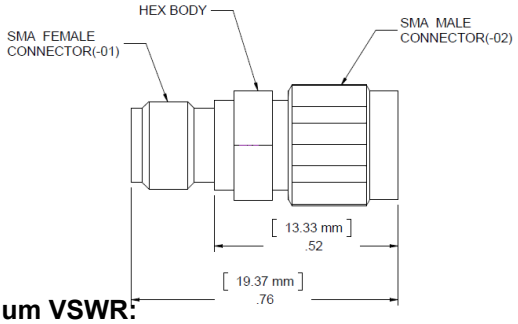
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block

WA6055H

WA6055H/6: 10 MHz – 6.0 GHz
WA6055H/12: 10 MHz – 12.4 GHz
WA6055H: 10 MHz – 18.0 GHz
WA6055H/26: 10 MHz – 26.0 GHz

50 VOLTS



Features

SMA stainless steel M/F connectors per MIL-STD -348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner Only– 6.0/12.4/18.0/26.0 GHz SMA DC Block. 5/16 hex provides a secure torqueing surface.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range:
WA6046: 10 MHz - 18.0 GHz.
WA6046/6: 10 MHz - 6.0 GHz.
WA6046/12: 10 MHz - 12.4 GHz.
WA6046/26: 10 MHz - 26.0 GHz.

Voltage: 50 volts

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature.

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR			
	WA6055H	WA6055H /6	WA6055H /12	WA6055H /26
0.01 - 1.0	1.20	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50	1.50
18.0 - 26.0	N/A	N/A	N/A	1.55

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)			
	WA6055H	WA6055H /6	WA6055H /12	WA6055H /26
0.01 - 1.0	0.25	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80	0.80
18.0 - 26.0	N/A	N/A	N/A	1.00

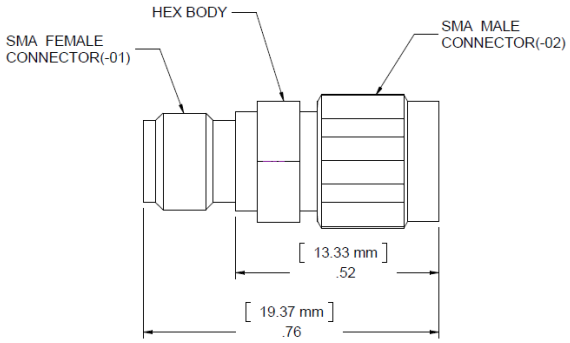
Dimensions:

Length: 19.37 (0.76)
Weight: 4 (0.14)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA6056H

9 kHz – 26.5 GHz **50 VOLTS**



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

5/16 hex provides secure torqueing surface for mating in hard to get places. Low cut-in frequency.

Inner DC block combined with high frequency response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 9 kHz - 26.5 GHz

Voltage: 50 volts

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature. **100 W** peak power.

Temperature Range: -45°C to + 105°C

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant .

Maximum VSWR:

Frequency	VSWR
	WA6056H
9 kHz - 10 kHz	1.45
10 kHz - 20 kHz	1.35
20 kHz - 18.0 GHz	1.35
18.0 GHz - 26.5 GHz	1.70

Maximum Insertion Loss:

Frequency	Insertion Loss (dB)
	WA6056H
9 kHz - 26.5 GHz	0.8

Dimensions:

Length: 19.37 (0.76)
Weight: 4 (0.14)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

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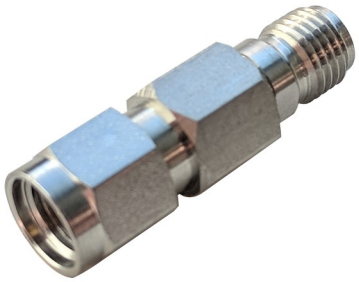
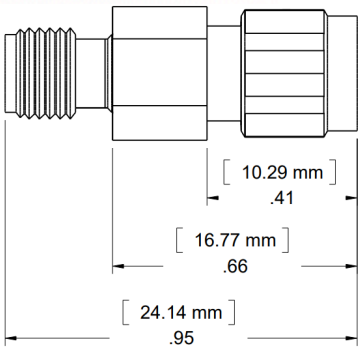
DC Block WA6057H

9 kHz – 30.0 GHz **50 VOLTS**





Features

3.5 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

5/16 hex provides secure torqueing surface for mating in hard to get places.

Inner DC block combined with high frequency response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 9 kHz - 30.0 GHz

Voltage: 50 volts

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature. **100 W** peak power.

Temperature Range: -65°C to + 105°C

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency	VSWR
	WA6057H
9 kHz - 10 kHz	1.45
10 kHz - 20 kHz	1.35
20 kHz - 18.0 GHz	1.35
18.0 GHz - 30.0 GHz	1.70

Maximum Insertion Loss:

Frequency	Insertion Loss (dB)
	WA6057H
9 kHz - 30.0 GHz	1.0

Dimensions:

Length: 24.2 (0.95)
Weight: 0.004 (0.14)

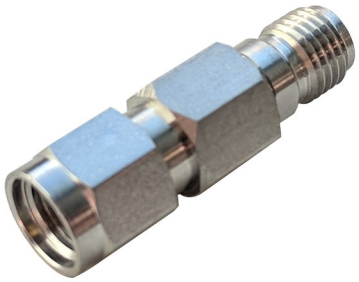
Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

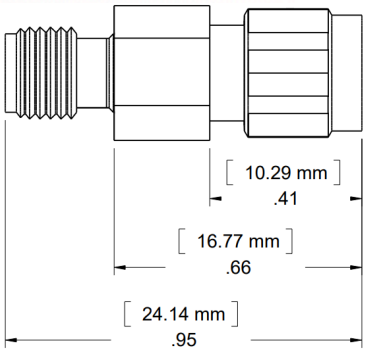
DC Block

WA6058H

9 kHz – 40.0 GHz

50 VOLTS





Features

Precision 2.92 mm stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

5/16 hex provides secure torqueing surface for mating in hard to get places.

Inner DC block combined with high frequency response.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 9 kHz - 40.0 GHz

Voltage: 50 volts

Power Rating: **20 W** maximum average rated power to 25°C ambient temperature. **100 W** peak power.

Temperature Range: -65°C to + 105°C

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency	VSWR
	WA6058H
9 kHz - 10 kHz	1.45
10 kHz - 20 kHz	1.40
20 kHz - 18.0 GHz	1.40
18.0 GHz - 40.0 GHz	1.70

Maximum Insertion Loss:

Frequency	Insertion Loss (dB)
	WA6058H
9 kHz - 30.0 GHz	1.0

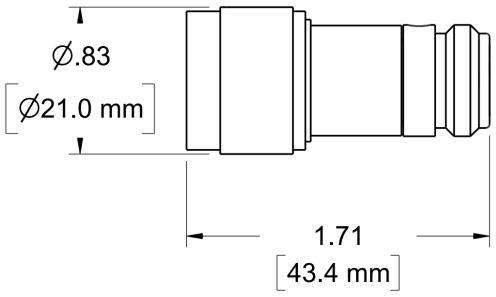
Dimensions:

Length: 24.2 (0.95)
Weight: 0.004 (0.14)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA7046

WA7046/6: 10 MHz – 6.0 GHz
WA7046/12: 10 MHz – 12.4 GHz
WA7046: 10 MHz – 18.0 GHz **100 VOLTS**



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner only– 6.0/12.4/18.0 GHz N-Type DC Block.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA7046: 10 MHz - 18.0 GHz.
WA7046/6: 10 MHz - 6.0 GHz.
WA7046/12: 10 MHz - 12.4 GHz.

Voltage: 100 volts

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature (Bidirectional).

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA7046	WA7046/6	WA7046/12
0.01 - 1.0	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)		
	WA7046	WA7046/6	WA7046/12
0.01 - 1.0	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80

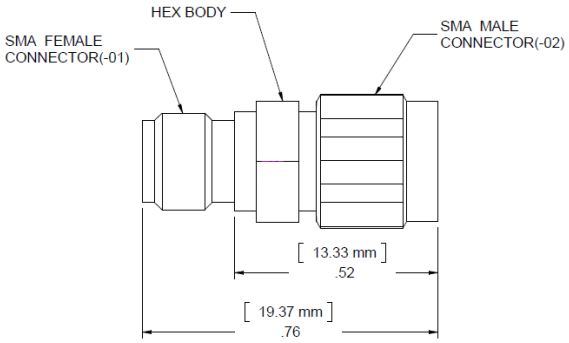
Dimensions:

Length:	43.4 (1.71)
Diameter:	21.0 (0.83)
Weight:	70 (2.6)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA7055H

WA7055H/6: 10 MHz – 6.0 GHz
WA7055H/12: 10 MHz – 12.4 GHz
WA7055H: 10 MHz – 18.0 GHz **100 VOLTS**



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner Only– 6.0/12.4/18.0 GHz SMA DC Block.

5/16 hex provides secure torqueing surface.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA7055H: 10 MHz - 18.0 GHz.
WA7055H/6: 10 MHz - 6.0 GHz.
WA7055H/12: 10 MHz - 12.4 GHz.

Voltage: 100 volts

Power Rating: **2 W** maximum average rated power to 25°C ambient temperature.

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA7055H	WA7055H/6	WA7055H/12
0.01 - 1.0	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)		
	WA7055H	WA7055H/6	WA7055H/12
0.01 - 1.0	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80

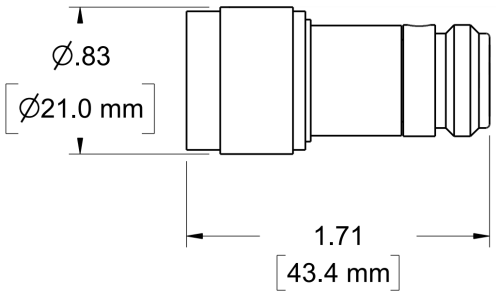
Dimensions:

Length: 19.37 (0.76)
Weight: 4 (0.14)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA8046

WA8046/6: 10 MHz – 6.0 GHz
WA8046/12: 10 MHz – 12.4 GHz
WA8046: 10 MHz – 18.0 GHz **200 VOLTS**



Features

Type N stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner only– 6.0/12.4/18.0 GHz N-Type DC Block.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA8046: 10 MHz - 18.0 GHz.
WA8046/6: 10 MHz - 6.0 GHz.
WA8046/12: 10 MHz - 12.4 GHz.

Voltage: 200 volts

Power Rating: **5 W** maximum average rated power to 25°C ambient temperature (Bidirectional).

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA8046	WA8046/6	WA8046/12
0.01 - 1.0	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)		
	WA8046	WA8046/6	WA8046/12
0.01 - 1.0	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80

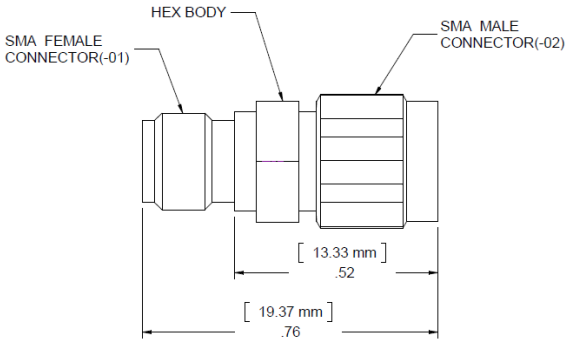
Dimensions:

Length:	43.4 (1.71)
Diameter:	21.0 (0.83)
Weight:	70 (2.6)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA8055H

WA8055H/6: 10 MHz – 6.0 GHz
WA8055H/12: 10 MHz – 12.4 GHz
WA8055H: 10 MHz – 18.0 GHz **200 VOLTS**



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner Only– 6.0/12.4/18.0 GHz SMA DC Block. 5/16 hex provides secure torqueing surface for mating in hard to get places.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: WA8055H: 10 MHz - 18.0 GHz.
WA8055H/6: 10 MHz - 6.0 GHz.
WA8055H/12: 10 MHz - 12.4 GHz.

Voltage: 200 volts

Power Rating: 2 W maximum average rated power to 25°C ambient temperature (Up to 10 W).

Temperature Range: -65°C to +125°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper contacts. RoHS Compliant

Maximum VSWR:

Frequency (GHz)	VSWR		
	WA8055H	WA8055H/6	WA8055H/12
0.01 - 1.0	1.20	1.20	1.20
1.0 - 4.0	1.30	1.30	1.30
4.0 - 8.0	1.40	1.40	1.40
8.0- 18.0	1.50	N/A	1.50

Maximum Insertion Loss:

Frequency (GHz)	Insertion Loss (dB)		
	WA8055H	WA8055H/6	WA8055H/12
0.01 - 1.0	0.25	0.25	0.25
1.0 - 4.0	0.50	0.50	0.50
4.0 - 8.0	0.80	0.80	0.80
8.0- 18.0	0.80	N/A	0.80

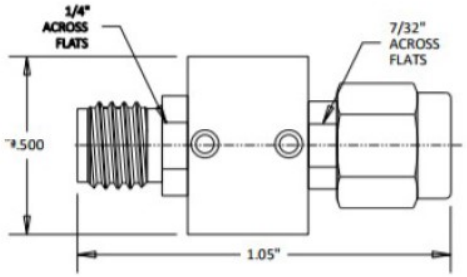
Dimensions:

Length: 19.37 (0.76)
Weight: 4 (0.14)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA8038

10 MHz – 18.0 GHz 200 VOLTS



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Outer DC Block combined with high frequency response. Bi-directional.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 10 MHz - 18.0 GHz.

Voltage: 200 volts

Temperature Range: -55°C to +105°C.

Construction: Passivated stainless steel connectors, PEEK body. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR: 1.35

Maximum Insertion Loss: 0.5 dB

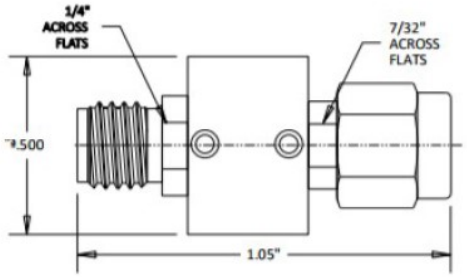
Dimensions:

Length:	38.1 (1.05)
Diameter:	12.7 (0.50)
Weight:	0.004 (0.14)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

DC Block WA8039

10 MHz – 18.0 GHz 200 VOLTS



Features

SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate nondestructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Inner/Outer DC Block combined with high frequency response. Bi-directional.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: 10 MHz - 18.0 GHz.

Voltage: 200 volts

Temperature Range: -55°C to +105°C.

Construction: Passivated stainless steel connectors, PEEK body. Gold plated beryllium copper contacts. RoHS Compliant.

Maximum VSWR: 1.35

Maximum Insertion Loss: 0.5 dB

Dimensions:

Length:	38.1 (1.05)
Diameter:	12.7 (0.50)
Weight:	0.004 (0.14)

Note: Dimensions are given in mm (in), or kg (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

High-Reliability and Environment Qualified Components

Introduction

Ruggedness and reliability have been designed in across our product lines and proven in the field. This section of our catalog provides a brief overview of our capabilities and a sample of our products that have undergone formal qualification testing.

Designed In

All of our connector interfaces have been designed for compliance to MIL-PRF-39012 and MIL-STD-348A standards. The materials and construction techniques employed are targeted towards compliance with MIL-DTL-3933 (Fixed Attenuators), MIL-DTL-24215 (Variable Attenuators), or MIL-DTL-39030 (Terminations) standards as applicable.

Proven Out

Our products have undergone qualification and screening tests for a variety of environments including:

- Naval Shipboard
- Aircraft, Fixed Wing and Rotary Wing
- Satellite and low out-gassing environments

Standard testing is performed using MIL-STD-202 and MIL-STD-810 methodologies as applicable either at our facility in Mt Airy, Maryland, or at a certified environmental test lab.

Sample of High-Reliability/Qualified Products

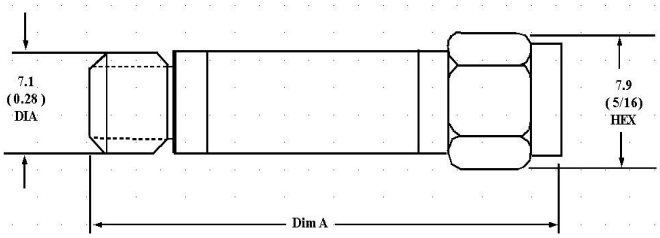
Model Number	Product Type	Frequency Range (GHz)	Connectors	Page No.
WA32	Attenuator	DC-18	SMA	213

Fixed Coaxial Attenuator

High Reliability

WA32

DC - 18 GHz **2 WATTS**



Features

Type SMA stainless steel M/F connectors per MIL-STD-348A, interface dimensions mate non-destructively with MIL-PRF-39012. Designed to meet MIL-DTL-3933 environmental specification.

Screened for military applications.

Specifications

Nominal Impedance: 50 ohms.

Frequency Range: DC - 18 GHz.

Nominal dB Values: 0 - 60 dB

Power Coefficient: < 0.005 dB/dB/W; Bidirectional in power.

Power Rating: **2W** average to 25°C ambient temperature, de-rated linearly to 1.25 W at 75° C and 0.5 W at 125°C, **500 W** peak (5 µsec pulse width, 0.2% duty cycle).

Temperature Range: -55°C to +125°C.

Temperature Coefficient: < 0.0004 dB/dB/°C.

Construction: Passivated stainless steel body and connectors. Gold plated beryllium copper female contact, stainless steel male contact RoHs Compliant.

Calibration: Insertion Loss and VSWR per-formed across frequency range. Calibration test data available at additional cost.

Standard Nominal Values and Deviations:

Attenuation (dB)	Accuracy ± dB
1 - 6	0.30
7 - 12	0.50
13 - 20	0.70
21 - 40	1.00
41 - 60	1.50

Maximum VSWR:

Frequency (GHz)	VSWR
DC - 4.0	1.15
4.0 - 8.0	1.20
8.0 - 12.4	1.25
12.4 - 18.0	1.35

Dimensions:

Attenuation (dB)	WA32	
	Length (Dim "A"')	Weight
0 - 12	31.2 (1.23)	3.9 (.14)
13 - 20	33.3 (1.31)	4.3 (.15)
21 - 30	35.3 (1.41)	4.9 (.17)
31 - 60	43.4 (1.71)	6.5 (.23)

Note: Dimensions are given in mm (in), or g (oz). Weight figure is nominal, with our standard connector configuration. Additional connector options may be available.

ORDERING INFORMATION

HOW TO ORDER: Please order by both catalogue number and description of the component to avoid confusion. Special features and configurations not listed in this catalogue may be available. Please contact the factory regarding any non-standard features.

WHERE TO ORDER: Address all purchase orders and other communication to:

Weinschel Associates
2505 Back Acre Circle, Mt Airy, MD 21771
Phone: 877.948.8342/301.963.4630
Fax: 301.963.8640
e-mail: sales@weinschelassociates.com

DOMESTIC TERMS: Formal price quotations remain in effect for 60 days unless otherwise stated. Standard payment terms for approved customers are Net 30 days. Where credit has not been established, payment must be arranged prior to shipment or COD. All pricing is FOB Gaithersburg, Maryland unless otherwise stated and includes commercial inspection and packaging for shipment. **All major credit cards are accepted.**

EXPORT TERMS: Payment terms are cash in advance or irrevocable Letter of Credit payable through a bank to be specified by Weinschel Associates. All prices are in US Dollars, FOB Gaithersburg, Maryland. All bank charges are to be paid by the customer.

SOURCE INSPECTION: When source inspection is required, an additional charge of either $100 or two (2%) of the purchase order value will be levied, whichever is greater.

CERTIFICATES OF COMPLIANCE: A Certificate of Compliance is shipped with every order along with the packing slip. Extra copies are available upon request at any time.

TEST DATA: Comprehensive test data is available for an extra charge. Weinschel Associates tests 100% of its shipped product against published specifications. Data is retained when required by the customer.

TECHNICAL CONSULTATION: Our engineering department is available for informal and formal consultation on technical, calibration, and service issues. Call or e-mail the factory.

WARRANTY REPAIRS: In the event of a problem with an item, please contact the factory. If a return is necessary, a Return Material Authorization (RMA) number will be provided by which the returned item will be identified and repaired or replaced. Please provide complete details of the complaint along with contact and shipping information for the items return.

NON-WARRANTY REPAIRS: If return of an item is desired for non-warranty repair and/or calibration, please contact the factory. A Return Material Authorization (RMA) number will be provided by which the returned item will be identified. Upon receipt, an evaluation of the item will be performed and the price to repair or recalibrate will be provided for approval (unless pre-approved). Weinschel Associates furnishes full warranty on all repairs for 90 days following shipment.

SHIPPING INSTRUCTIONS: Weinschel Associates will use best judgment and best method shipping for your items. Special instructions will be followed.

SPECIFICATION CHANGES: Changes to specifications may occur at any time without notification and without any obligation to Weinschel Associates to revise previously sold items. We reserve the right to discontinue any item without notice.

CANCELLATIONS AND RETURNS: Order cancellation must be authorized by Weinschel Associates and the customer may incur a cancellation charge. All returns are subject to a restocking charge dependent upon elapsed time.

MAJOR CREDIT CARDS ACCEPTED