

Terminations & Loads





General Information

In this section of the catalog, each Termination is outlined utilizing individual data sheets containing product features, specifications, and outline drawings. These data sheets are preceded by a quick reference guide to help you select the Termination(s) that fits your needs. The page number for each Termination data sheet is given in the quick reference guide.













Terminations...dc-40 GHz, 1-10 Watts

Model Number	Average Power (Watts)	Peak Power (kW)	Frequency Range (GHz)	SWR	Connector Type	Page No.	
★ 1404N	1	1	dc-18.0	1.02-1.08*	N	77	
★ 1406A ★ 1408	2	0.5	dc-18.0	1.05-1.21* 1.04-1.15*	SMA	78	
★ RS3016	1	0.25	dc-18.0	105-1.20*	SMA (Male only)	76	
1418	10	1	dc-18.0	1.15-1.40*	N	87	
★ 1419	10	1	dc-18.0	1.20-1.35*	SMA	84	
★ 1424	5	5	dc-12.4	1.03-1.30*	N, TNC	81	
1425	10	1	dc-12.4	1.03-1.40*	N, TNC	86	
★ 1437RA	2	0.25	dc-6.0	1.05-1.10*	SMA	76	
1443	5	0.5	dc-18.0	1.20	SMA	82	
1445A (New)	5	0.2	dc-40.0	1.20-1.35*	2.92mm	83	
★ 1459/A (New)	2	0.5	dc-40.0	1.10-1.25*	2.92mm	79	
1453	10	1	dc-8.5	1.15-1.25*	N	85	
1454	1	0.25	dc-26.5	1.20-1.35*	SMP/GPO™	21	
★ 1455	2	1	dc-18.0	1.20-1.30*	N	80	

★ EXPRESS SHIPMENT AVAILABLE.

* VARIES WITH FREQUENCY.

Terminations...dc-26.5 GHz, 25-100 Watts

Model Number	Average Power (Watts)	Peak Power (kW)	Frequency Range (GHz)	SWR	Connector Type	Page No.	
★ 1426	50	5	dc-8.5	1.20-1.30*	N or 2.92mm	94	
★ 1427	25	5	dc-10.0	1.10-1.15*	N or 2.92mm	89	
1429	25	1	dc-18.0	1.20	N or 3.5mm	90	
1430	50	1	dc-18.0	1.15-1.30*	N or 3.5mm	95	
1431	100	1	dc-18.0	1.20-1.30*	N or 3.5mm	99	
1440	100	10	dc-4.0	1.15	N	97	
1441	50	5	dc-4.0	1.15	N	93	
1442	100	5	dc-8.5	1.20-1.30*	N	98	
1444	25	0.5	dc-26.5	1.25	3.5mm	91	
1446 1447	25 50	5 5	dc-5.0 dc-5.0	1.20 1.20	7/16 7/16	92	
1452	25	5	dc-4.0	1.10-1.20*	N or 2.92mm	88	
1457 1458	50 50	5 5	dc-18.0 dc-22.0	1.30 1.30	TNC 3.5mm	96	

★ EXPRESS SHIPMENT AVAILABLE.

* VARIES WITH FREQUENCY.


Terminations...dc-8.5 GHz. 150-1,000 Watts

Model Number	Average Power (Watts)	Peak Power (kW)	Frequency Range (GHz)	SWR	Connector Type	Page No.	
1428 1435	150	10	dc-1.5 dc-5.0	1.10-1.15*	N	100	
1432	150	5	dc-8.5	1.20-1.30*	N	103	
1433	250	10	dc-5.0	1.10-1.15*	N	104	
1434	500	10	dc-2.5	1.10	N	105	
1439	150	10	dc-2.5	1.20	N	102	
1448	150	10	dc-5.0	1.25	7/16	101	
1456	1,000	10	dc-3.0	1.15-1.25*	N or 7/16	106	

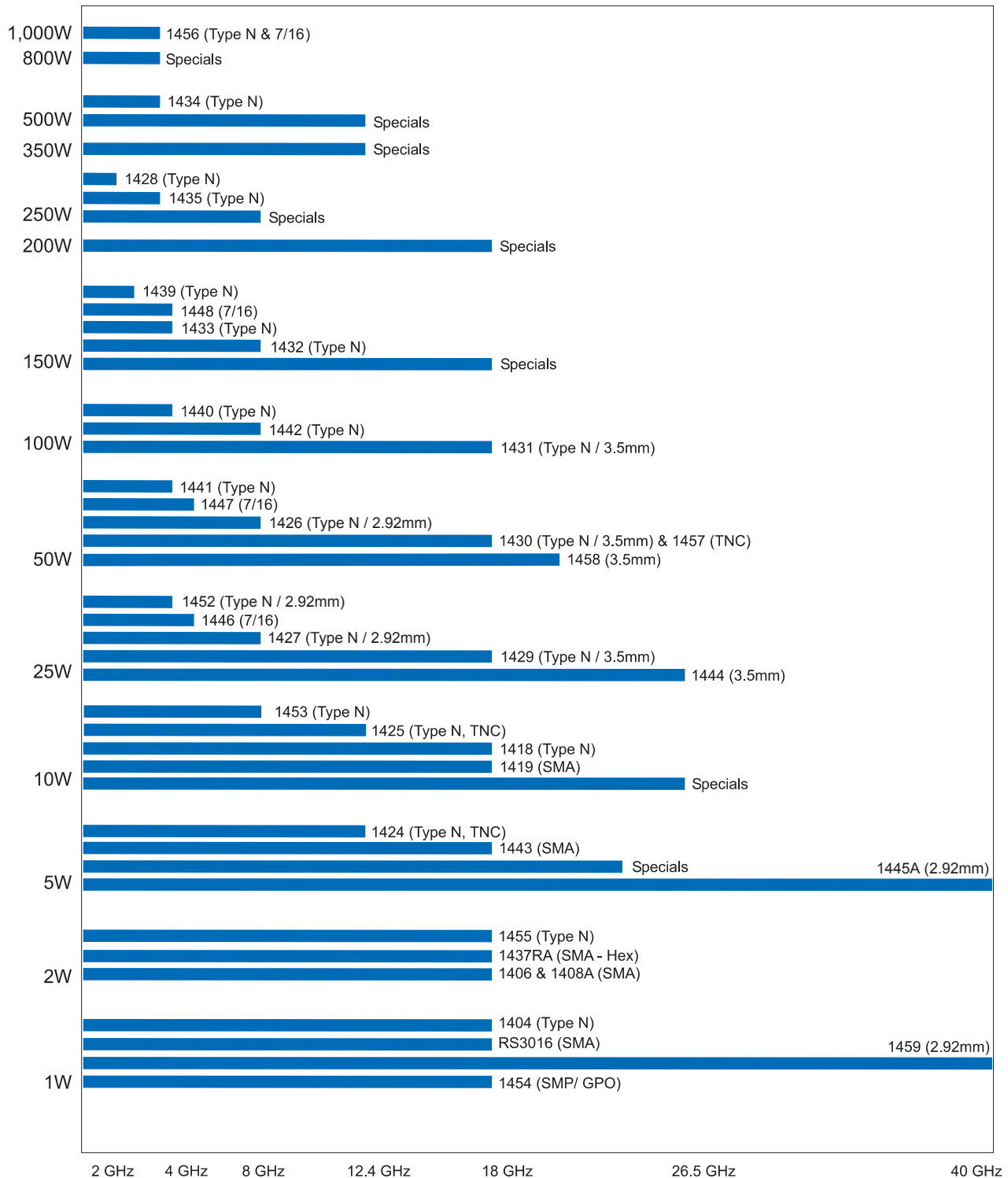
★ EXPRESS SHIPMENT AVAILABLE.

* VARIES WITH FREQUENCY.

Low IM Terminations...dc-18 GHz, 25-100 Watts

Model Number	Average Power (Watts)	Peak Power (kW)	Frequency Range (GHz)	SWR	Connector Type	Page No.	
1426	50	5	dc-8.5	1.20-1.30*	N or 2.92mm	94	
1427	25	5	dc-10.0	1.10-1.15*	N or 2.92mm	89	
1429	25	1	dc-18.0	1.20	N or 3.5mm	90	
1430	50	1	dc-18.0	1.15-1.30*	N or 3.5mm	95	
1431	100	1	dc-18.0	1.20-1.30*	N or 3.5mm	99	
1446 1447	25 50	5 5	dc-5.0 dc-5.0	1.20 1.20	7/16 7/16	92	
1448	150	10	dc-5.0	1.25	7/16	101	

Coaxial Terminations & Loads....



Termination Selection Guide: Power Handling / Frequency / Connector Type



Frequently Ask Questions about Coaxial Terminations....

What are the advantages of Weinschel's terminations?

Most Weinschel coaxial terminations feature a combination of advantages over other designs:*

1. Most Weinschel terminations feature injection molded dielectric for better center pin captivation and alignment. Injection molded dielectric also eliminates the need for the epoxy hole "stake" as seen in other designs. This epoxy hole in other designs is subject to RF leakage and movement when exposed to environmental extremes and prolonged use.
2. Weinschel coaxial terminations have a proprietary resistor element fired at high temperatures (950°) for superior long term stability over temperature, power and time.
3. Weinschel coaxial terminations have no solder contacts. They feature spring loaded plunger contacts to the resistor cards that provide expansion tolerant operation over wide temperature and power ranges.
4. Weinschel terminations are made with high quality materials and machined to very close tolerances, the result is a design that stands up to severe environments and usage.
5. High power designs feature special high temperature support beads.

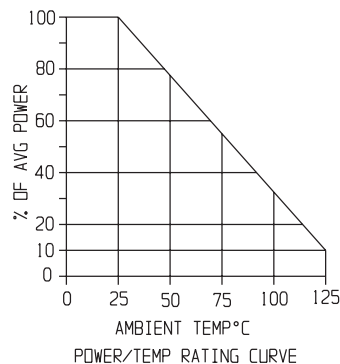
Can Weinschel provide special terminations?

Yes. Weinschel has produced many custom fixed attenuators and terminations. Specialized designs continue to be a significant part of Weinschel's product offering. Special features may include:

1. Custom Connector Configurations
2. Matched Pairs or Sets
3. Lower VSWR
4. Conductive Cooled
5. Special Mounting & Environmental Conditions

How is the power rating calculated?

A termination will handle specified power at ambient temperatures as specified in the catalog. No special fan cooling is required. At higher temperatures the power rating



is calculated by using catalog specifications and a straight line graph. For instance the power rating of the Model 1430 attenuator is 100 watts at 25°C ambient and 10 watts at 125°C. Using linear graph paper, plot a straight line between these two points.

This plot shows that the power rating at 75°C is approximately 56 Watts.

Can Weinschel provide terminations for space applications?

Yes. Weinschel terminations are being used on most major U.S. military and commercial communication satellites. Weinschel Terminations can be screened to your specifications and testing requirements.

Weinschel's use of precision connectors, injection molded captivation of connector contacts, internal spring/plunger contacts (no solder or contact fingers) and very precise and stable resistors result in a superior electrical and mechanical design that is ideally suited for space applications. Page 17 provides a list of Weinschel's program experience and available testing programs for space qualified components.



Does Weinschel offer High Reliability Models?

Most Weinschel Corporation Terminations & Loads can be supplied according to customer specified testing, environmental or military or government specification requirements.

What is Third-Order Intermodulation Distortion?

(IM3) Intermodulation distortion (IM) consists of the spurious signals which result from the mixing of nth order frequencies in the non-linear elements of a component. Third order intermodulation distortion is of particular interest because third order products typically represent the highest level distortion appearing close to the desired signal, and as such the highest level non-filterable distortion. Third order IM level (IM3) is tested by injecting two pure tones of equal magnitude (f1 and f2) into the component to be tested. The third order IM products will appear in the output spectrum at the frequencies 2f1-f2 and 2f2-f1. These products are characterized by defining their level (in dBc) relative to the fundamental output tones at either f1 or f2.

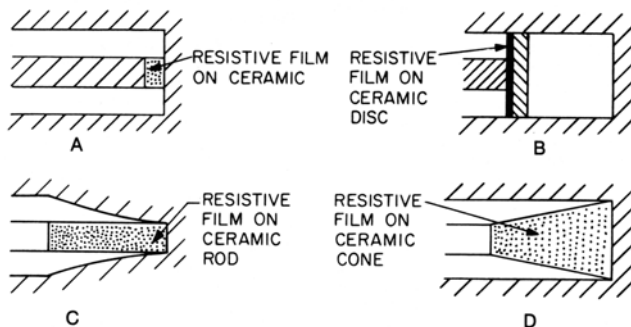
Does Weinschel offer any of terminations with IM3 specified?

Yes, Weinschel has recently introduced new as well as updated models specifically for applications requiring low intermodulation distortion. New models include a series of attenuators containing 7/16 connectors that operate over the dc to 5 GHz frequency range. These models are available in 25, 50 150 Watt varieties. Weinschel can also modify or specify IM3 on several of its standard standard models such as 1418, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1435, 1439, & 1442. Refer to the specific data sheet for IM3 details.

How do I select a termination for my application?

Termination applications exist in almost every phase of microwave technology from design and measurement to systems. Good terminations are an indispensable aid in making bench measurements on microwave components in the engineering laboratory, as those ports of a multiport microwave device which are not involved in the measurement should be terminated in their characteristic impedance in order to ensure an accurate measurement. Many microwave systems employ directional couplers which require terminations on at least one port, and most have various modes of operation or test where terminations are needed on certain terminals.

A matched termination of a generalized transmission line is ideally represented by an infinite length of that line having small, but non-zero loss per unit length so that all incident energy is absorbed and none is reflected. Although this type of matched load (termination) was actually used extensively during the early exploration of high frequencies where the wavelength was short enough for the method to be employed, more efficient and practical types of termination have been developed.



There are several ways in which a matched termination for a 50-ohm coaxial line may be realized. Some of these are shown below. Illustration A of the Figure shows a cross-section of coaxial line terminated in a lumped 50-ohm series resistor which is a short length of resistive film on a cylindrical ceramic substrate. Illustration B is similar to A except that the 50-ohm resistor is a film on a ceramic disc and appears in shunt with the open of the coaxial line.

More effective matched loads for very high frequencies are shown in illustration C and D.

The outer conductor in the design of illustration C is tapered in either an exponential or a tractrix curve from the region near the start of the resistive film on the inner conductor to the end of the resistor. The design of illustration D to these parameters, it is usually necessary to specify the shaped ceramic body extending from the inner conductor. The advantage of this design is that it dissipates more power. Weinschel matched termination designs are similar to those shown in C.

A well-matched attenuator of at least 20 dB loss can also be utilized as a termination. This is particularly useful in high power applications. For example our new Model 1456 1,000 Watt termination is supplied with a second connector for power monitoring.



Model 1437RA
Model RS3016
Subminiature Coaxial Terminations

dc to 6.0 GHz/2 Watts
dc to 18.0/1Watt

Low Cost, SMA Connector



Features

- /// **Subminiature Size and Lightweight**
- /// **Low Cost**
- /// **Low SWR**
- /// **Cellular Applications:** Optimized for use in the wireless communications bands.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: M/F1437RA: dc to 6.0 GHz
 RS3016: dc to 18.0 GHz

POWER RATING:

Model 1437RA: 2.0 watts **average** @ 25°C ambient temperature, derated linearly to 0.5 watts @ 125°C. 250 watts **peak** maximum (5 μ sec pulse width; 0.05% duty cycle).

Model RS3016: 1.0 watts **average** @ 25°C ambient temperature, derated linearly to 0 watts @ 125°C. 250 watts **peak** maximum (5 μ sec pulse width; 0.05% duty cycle).

MAXIMUM SWR:

Frequency Range (GHz)	1437RA	RS3016
dc - 4	1.05	1.05
4 - 8 (6)	1.10	1.10
8 - 12.4	---	1.15
12.4 - 18	---	1.20

TEMPERATURE RANGE: -65°C to +125°C

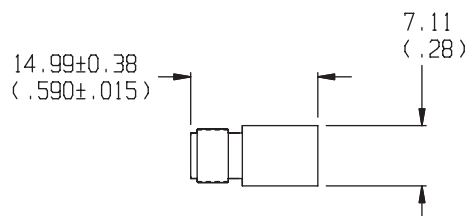
CONNECTOR: **Model 1437RA:** SMA connectors - mate nondestructively with MIL-C-39012 connectors. Choice of male or female connector, prefix model number with M for male and F for female. **Model RS3016** available in SMA male only!

CONSTRUCTION: Passivated stainless steel connectors with gold plated beryllium copper contacts.

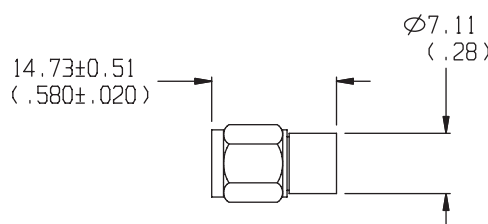
WEIGHT: M1437RA: 3.0 g (0.11 oz)
 F1437RA: 4.0 g (0.14 oz)
 RS3016: 2.3 g (0.08 oz)

PHYSICAL DIMENSIONS:

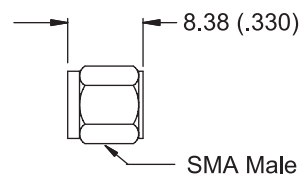
Model F1437RA:



Model M1437RA:



Model RS3016 (male only):



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1404N Precision Coaxial Terminations

dc to 18.0 GHz
1 Watt

Lab Standard Connectors



Features

- /// **Precision Connector** - Interface dimensions per MIL-STD-348 Test connector
- /// **Rugged Construction** - Numerically controlled machining is used to produce high quality uniform parts with controlled concentricity and surface finishes. The result is excellent SWR repeatability.

Specifications

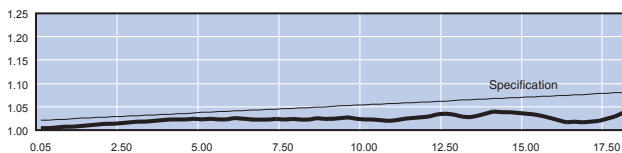
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

POWER RATING: 1.0 watt **average** to 25 °C ambient temperature, derated linearly to 0.1 watts @ 125°C. 1 kilowatt **peak** maximum (5 μ sec pulse width; 0.05 % duty cycle).

MAXIMUM SWR:

Model	SWR
F1404N	$\pm 1.04 + 0.0023f$ (GHz)
M1404N	$\pm 1.02 + 0.0033f$ (GHz)



Typical M1404 SWR Performance

TEMPERATURE RANGE: -55°C to +85°C

CALIBRATION: SWR and other test data can be provided at additional cost.

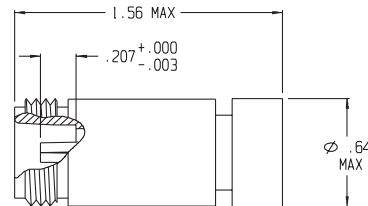
CONNECTOR: Type N connector - mates nondestructively with MIL-C-39012 connector. Choice of male or female connector. When ordering, prefix model number with M for male and F for female.

CONSTRUCTION: Gold plated brass body; stainless steel connector; gold plated beryllium copper contacts.

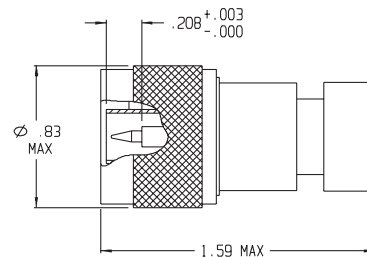
WEIGHT: Net, 110 g (4 oz)

PHYSICAL DIMENSIONS:

MODEL F1404N:



MODEL M1404N:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1406A & 1408 Subminiature Coaxial Terminations

dc to 18.0 GHz
2 Watts

Ruggedized SMA Connector



Features

Models 1406A & 1408 are general purpose subminiature terminations that operate in the frequency range of dc to 18 GHz but are usable to 26.5 GHz.

- /// **Low SWR** - Models 1406A has low VSWR across its operating range (typical SWR is less than specified). The Model 1408 has ultra-low SWR to 18 GHz (usable to 26.5 GHz).
- /// **Subminiature Size and Lightweight** - All models are approximately 0.5 inches long, and weigh less than 3 grams with male connector and 1.5 grams with female connector.
- /// **Rugged Construction.**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

POWER RATING: 2.0 watts **average** @ 25°C ambient temperature, derated linearly to 0.5 watts @ 125°C. 500 watts **peak** maximum (5 μ sec pulse width; 0.5% duty cycle).

MAXIMUM SWR:

Model	SWR
1406A	1.05 + 0.009f (GHz)
1408	1.04 + 0.006f (GHz)

TEMPERATURE RANGE: -54°C to +125°C

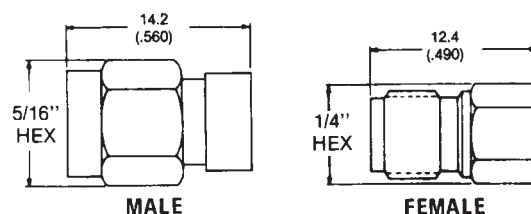
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: SMA connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male or female connector. When ordering, prefix model number with M for male and F for female.

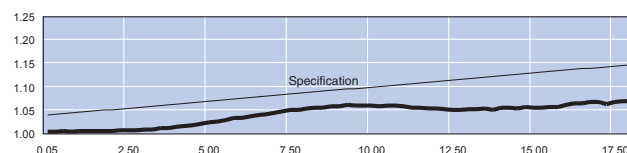
CONSTRUCTION: Passivated stainless steel.

WEIGHT: Male Connector: 2.8 g (0.1 oz)
Female Connector: 1.4 g (0.05 oz)

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.



Typical M1408 SWR Performance

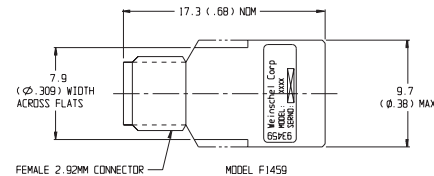
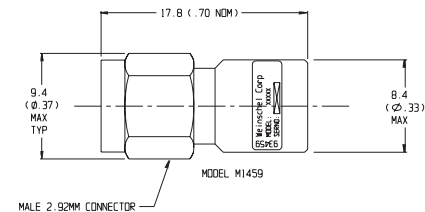
Model 1459 Subminiature Coaxial Terminations

dc to 40.0 GHz
2 Watt

Ruggedized 2.92mm Connector



WEIGHT: 4.0 g (0.11 oz) maximum
PHYSICAL DIMENSIONS:



Features

- /// **High Performance Cost Effective Design**
- /// **Subminiature Size and Lightweight** - All models are approximately 0.5 inches long, and weigh less than 3 grams with male connector
- /// **Low SWR Design Option**
- /// **Rugged Construction**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 40.0 GHz

POWER RATING: 2.0 watt **average** @ 25°C ambient temperature, derated linearly to 0.2 watts @ 125°C. 500 watts **peak** maximum (5 μ sec pulse width; 0.2% duty cycle).

MAXIMUM SWR:

Frequency Range (GHz)	F1459 M1459	F1459A	M1459A
dc - 18	1.15	1.10	1.10
18 - 40	1.25	1.18	1.15

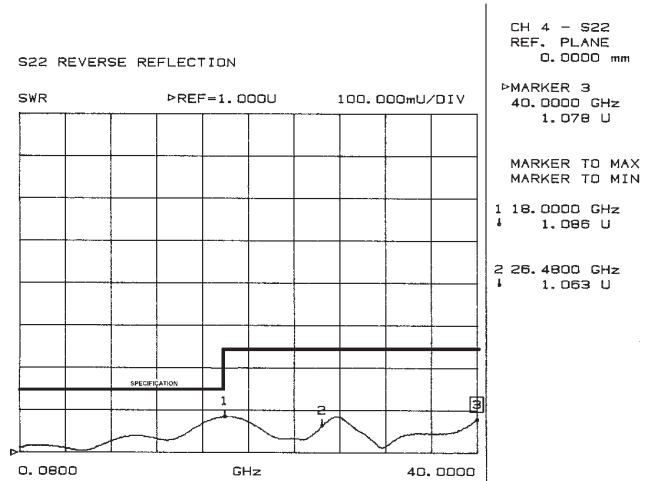
TEMPERATURE RANGE: -50°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Ruggedized 2.92mm connector compatible with SMA, 3.5mm and K[®] connector. Choice of male or female connector. When ordering, prefix model number with M for male and F for female.

NOTE:

1. All dimensions are given in mm (inches) and are maximum, unless otherwise specified.
2. K[®] is a registered trademark of the Anritsu-Wiltron 2.92 mm connector.



Typical M1459 SWR Performance

Model 1455 General Purpose Coaxial Terminations

dc to 18.0 GHz
2 Watt

Low Cost, Type N Connector



Features

- /// **Low Cost Type N Connector** - Interface dimensions per MIL-STD-348 Test connector.
- /// **Rugged Construction** - Numerically controlled machining is used to produce high quality uniform parts with controlled concentricity and surface finishes. The result is excellent SWR repeatability.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency Range (GHz)	1455-3 1455-3C	1455-4 1455-4C
dc - 8	1.20	1.20
8 - 12.4	1.25	1.20
12.4 - 18	1.30	1.25

POWER RATING: 2 watts **average** to 25°C ambient temperature, derated linearly to 1 watts @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 0.05 % duty cycle)

TEMPERATURE RANGE: -65°C to +125°C

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male or female connector. Order as follows:

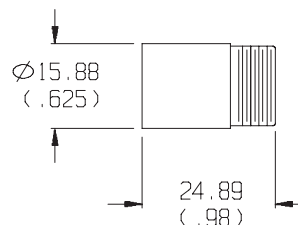
Model	Connector Type
1455-4	Type N Male
1455-3	Type N Female
1455-4C	Type N Male with chain
1455-3C	Type N Female with chain

CONSTRUCTION: Nickel plated brass connector; gold plated beryllium copper contacts, stainless steel bead chains.

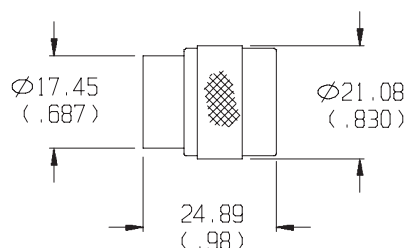
WEIGHT: 110 g (4 oz) maximum

PHYSICAL DIMENSIONS:

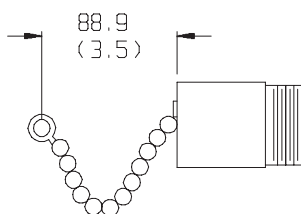
Model 1455-3:



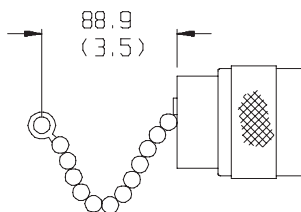
Model 1455-4:



Model 1455-3C:



Model 1455-4C:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1424 Medium Power Coaxial Terminations

dc to 12.4 GHz
5 Watt

Type N or TNC Connectors



CONSTRUCTION: Stainless steel connector; gold plated beryllium copper contacts

WEIGHT: Net 60 g (2 oz)

PHYSICAL DIMENSIONS:

Features

- /// **Connector Options** - Choice of N or TNC. Mate nondestructively with connector manufactured in accordance with MIL-C-39012.
- /// **Rugged Construction.**

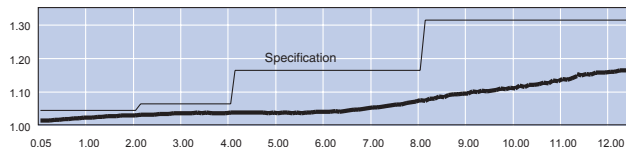
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 12.4 GHz

MAXIMUM SWR:

Frequency Range (GHz)	Connector Type	
	Type N	TNC
dc - 2	1.03	1.10
2 - 4	1.05	1.15
4 - 8	1.15	1.25
8 - 12.4	1.30	1.40



Typical 1424-3 SWR Performance

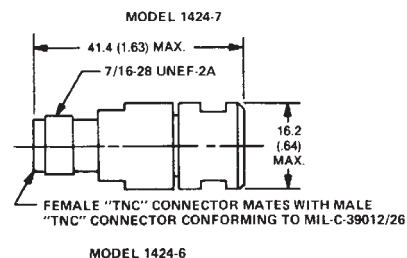
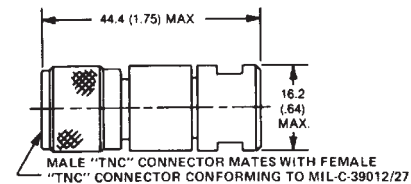
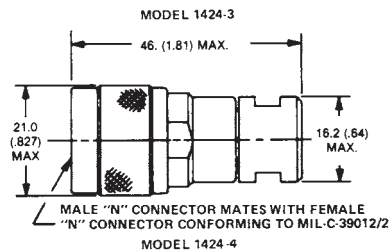
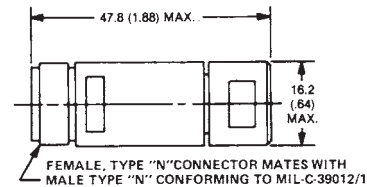
POWER RATING: 5 watts **average** @ 25°C ambient temperature, derated linearly to 0 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 0.05 % duty cycle)

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: Test data supplied at dc resistance and SWR at 2.0, 4.0, 8.0, and 12.0 GHz. Other test data can be provided at additional cost.

CONNECTOR: Type N or TNC connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector.

Connector Options	Type/Description
3	Type N, Female
4	Type N, Male
6	TNC, Female
7	TNC, Male



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1443 Medium Power Coaxial Terminations

dc to 18.0 GHz
5 Watts

Subminiature, Ruggedized SMA Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Precision Injection Molded Connector.**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.20

POWER RATING: 5 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) to 25°C ambient temperature, derated linearly to 0.5 watts @ 125°C. 500 watts **peak** (5 μ sec pulse width; 0.5% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

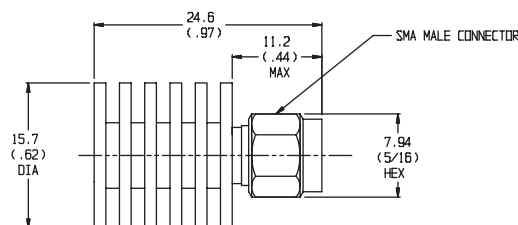
CONNECTOR: SMA connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-2) or female (-1) connector.

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

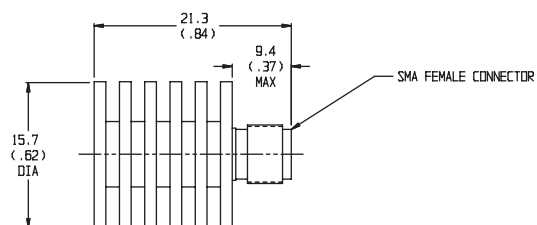
WEIGHT: 10 g (0.35 oz)

PHYSICAL DIMENSIONS:

Model 1443-2:



Model 1443-1:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1445A Medium Power Coaxial Terminations

dc to 40.0 GHz
5 Watts

2.92mm Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Precision Injection Molded Connector.**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 40.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.20
18 - 40	1.35

POWER RATING: 5 watts **average** (mounted horizontally) to 25°C ambient temperature, derated linearly to 0.5 watts @ 125°C. 200 watts **peak** (5 μ sec pulse width; 1.25% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

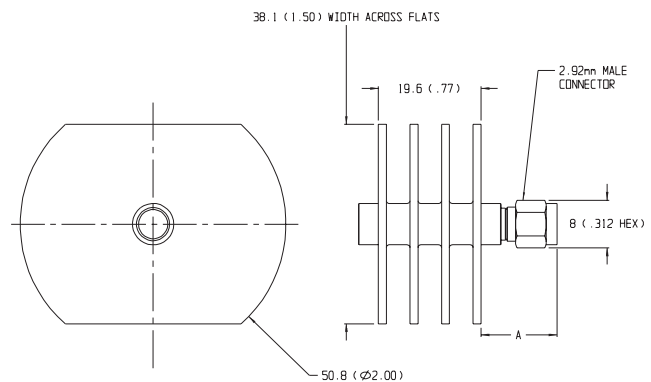
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: 2.92mm connector mate nondestructively with SMA per MIL-C-39012, 3.5mm and other 2.92mm connector. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Black, finned aluminum body, gold plated beryllium copper contacts.

WEIGHT: 200 g (7 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1445A-1	9.9 (0.39)	2.92mm female
1445A-2	14.0 (0.55)	2.92mm male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1419 Medium Power Coaxial Terminations

dc to 18.0 GHz
10 Watts

Ruggedized SMA Connector



Features

- /// **Miniature Size and Lightweight** - All models are approximately 1.6 inches long, and weigh less than 14 grams with male connector.
- /// **Quality connector with special high temperature support beads.**

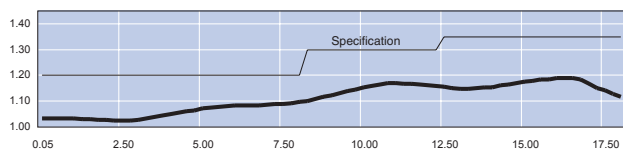
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 8	1.20
8 - 12.4	1.30
12.4 - 18	1.35



Typical M1419 SWR Performance

POWER RATING: 10 watts **average** (mounted horizontally) @ 25°C ambient temperature, derated linearly to 0 watts @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 0.05% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

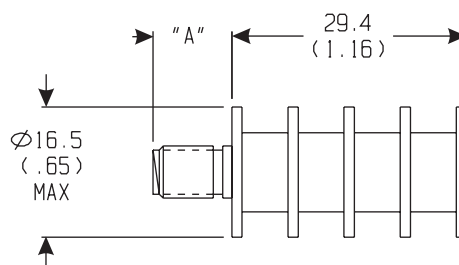
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: SMA connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male or female connector. When ordering, prefix model number with M for male and F for female.

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 14 g (0.49 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
M1419	11.2 (0.44)	SMA male
F1419	9.4 (0.37)	SMA female

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1453 Medium Power Coaxial Terminations

dc to 8.5 GHz
10 Watts

Type N Connector



Features

- /// Optimized for Wireless OEM and Test Applications.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Quality Injection Molded Connector.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 8.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.15
4 - 8.5	1.25

POWER RATING: 10 watts **average** (mounted horizontally) @ 25°C ambient temperature, derated linearly to 1 watt @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 0.05% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

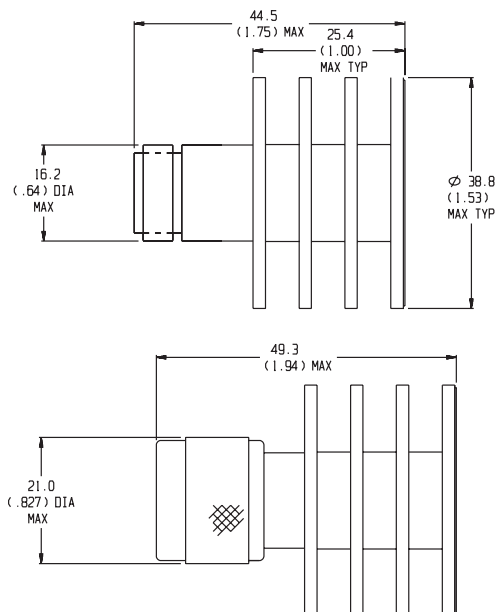
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 85 g (3 oz)

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1425 Medium Power Coaxial Terminations

dc to 12.4 GHz
10 Watts

Type N or TNC Connector



Features

- /// **Connector Options** - Choice of Type N or TNC - mate nondestructively with connector manufactured in accordance with MIL-C-39012.
- /// **Rugged Construction.**

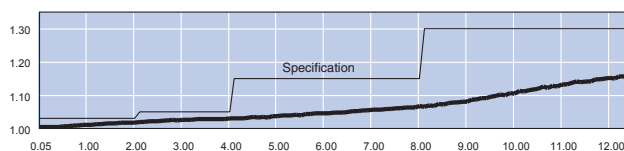
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 12.4 GHz

MAXIMUM SWR:

Frequency (GHz)	Connector Type	
	Type N	TNC
dc - 2	1.03	1.10
2 - 4	1.05	1.15
4 - 8	1.15	1.25
8 - 12.4	1.30	1.40



Typical 1425-4 SWR Performance

POWER RATING: 10 watts **average** (mounted horizontally) @ 25°C ambient temperature, derated linearly to 0 watts @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 0.05% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

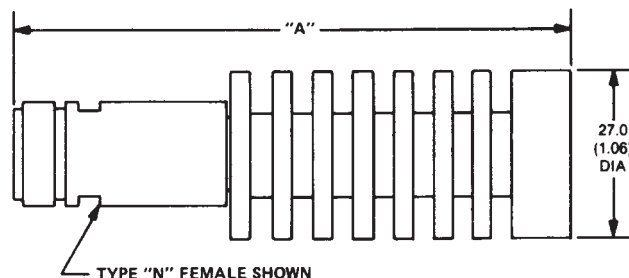
CONNECTOR: Type N or TNC connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector.

Connector Options	Type/Description
3	Type N, Female
4	Type N, Male
6	TNC, Female
7	TNC, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts

WEIGHT: Net 110 g (4 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1425-7	83.06 (3.30)	TNC, male
1425-6	80.01 (3.15)	TNC, female
1425-4	84.58 (3.33)	N, male
1425-3	86.36 (3.40)	N, female

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1418 Medium Power Coaxial Terminations

dc to 18.0 GHz
10 Watts

Type N Connector



Features

- /// Optimized for Wireless OEM and Test Applications.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Quality Injection Molded Connector.

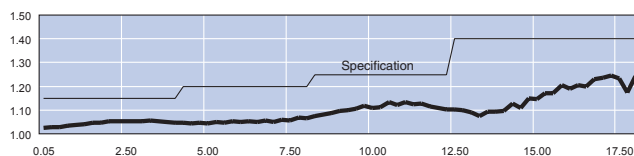
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.15
4 - 8	1.20
8 - 12.4	1.25
12.4 - 18	1.40



Typical M1418 SWR Performance

POWER RATING: 10 watts **average** (mounted horizontally) @ 25°C ambient temperature, derated linearly to 0 watt @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 0.05% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

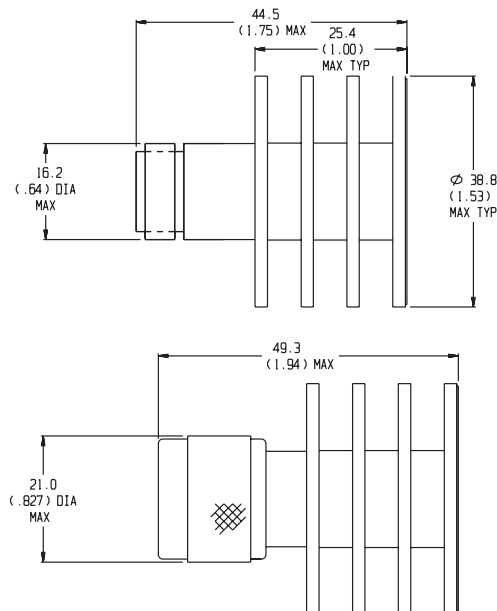
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male or female connector. When ordering, prefix model number with M for male and F for female.

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 90 g (3 oz)

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1452 Medium Power Coaxial Terminations

dc to 4.0 GHz
25 Watts

Type N or 2.92mm Connectors



Features

- /// Optimized for Wireless OEM and Test Applications.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Quality connector with special high temperature support beads.
- /// 5 Kilowatts Peak Power.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 4.0 GHz

MAXIMUM SWR*:

Frequency (GHz)	SWR
dc - 2	1.10
2 - 4	1.20

POWER RATING: 25 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 0.25% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

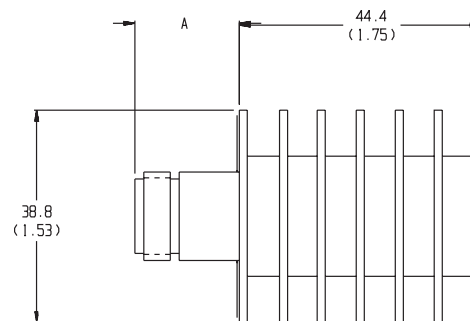
CONNECTOR: Type N or 2.92mm connectors mate nondestructively with MIL-C-39012 connector.

Connector Options	Type/Description
1	2.92mm, Female
2	2.92mm, Male
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 150 g (5.2 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1452-1	12.7 (0.50)	2.92mm female
1452-2	14.0 (0.55)	2.92mm male
1452-3	15.0 (0.59)	N female
1452-4	22.9 (0.90)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1427 Medium Power Coaxial Terminations

dc to 10.0 GHz
25 Watts

Type N or 2.92mm Connectors



Features

- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Quality connector with special high temperature support beads.
- /// Low Intermodulation Option
- /// 5 Kilowatts Peak Power

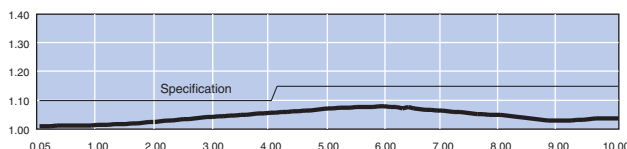
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 10.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.10
4 - 10	1.15



Typical M1427 SWR Performance

POWER RATING: 25 watts **average** (mounted **horizontally**) @ 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 0.25% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

INTERMODULATION (Model 1427-X-LIM Only): IM3 (Reflected) = -100 dBc with two input signals @ 869 MHz and 891 MHz with an average power of +41 dBm each.

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

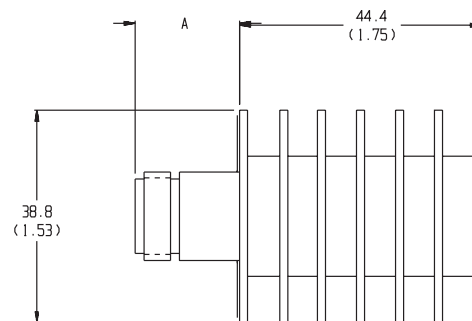
CONNECTOR: Type N or 2.92mm connectors mate nondestructively with MIL-C-39012 connector.

Connector Options	Type/Description
1	2.92mm, Female
2	2.92mm, Male
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 150 g (5.2 oz)

PHYSICAL DIMENSIONS:

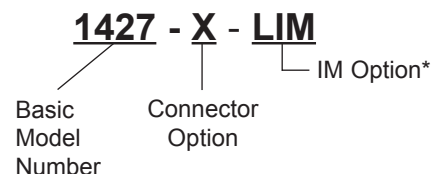


Model #	DIM A	Connector Type
1427-1	12.7 (0.50)	2.92mm female
1427-2	14.0 (0.55)	2.92mm male
1427-3	15.0 (0.59)	N female
1427-4	22.9 (0.90)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MODEL NUMBER DESCRIPTION:

Example:



* Add -LIM to entire model number for Low Intermodulation option. Option not available through Express.

Model 1429 Medium Power Coaxial Terminations

dc to 18.0 GHz
25 Watts

3.5mm or Type N Connector



Features

- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Rugged injection molded connector.
- /// Low Intermodulation Option.
- /// 1 Kilowatt Peak Power

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.20

POWER RATING: 25 watts average (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. 1 kilowatt peak (5 μ sec pulse width; 1.25% duty cycle).

INTERMODULATION (Model 1429-X-LIM Only): IM3 (Reflected) = -100 dBc with two input signals @ 869 MHz and 891 MHz with an average power of +41 dBm each.

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

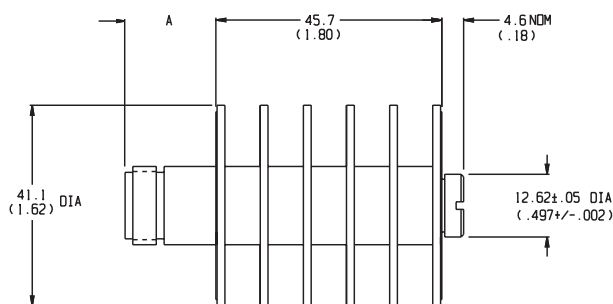
CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

3.5mm connector mate nondestructively with SMA per MIL-C-39012, 2.92mm and other 3.5mm connector. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contact or stainless steel male contact.

WEIGHT: 100 g (3.5 oz)

PHYSICAL DIMENSIONS:

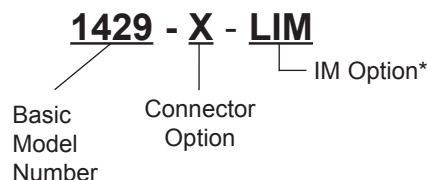


Model #	DIM A	Connector Type
1429-1	13.2 (0.52)	3.5mm female
1429-2	14.0 (0.55)	3.5mm male
1429-3	18.3 (0.72)	N female
1429-4	23.1 (0.91)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MODEL NUMBER DESCRIPTION:

Example:



* Add -LIM to entire model number for Low Intermodulation option.



Model 1444 Medium Power Coaxial Terminations

dc to 26.5 GHz
25 Watts

3.5mm Connector



Features

- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Precision Connectors.
- /// Flat Response.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 26.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 26.5	1.25

POWER RATING: 25 watts average (**mounted horizontally**) average @ 25°C ambient temperature, derated linearly to 2.5 watt @ 125°C. 500 watts **peak** (5 μ sec pulse width; 2.5% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

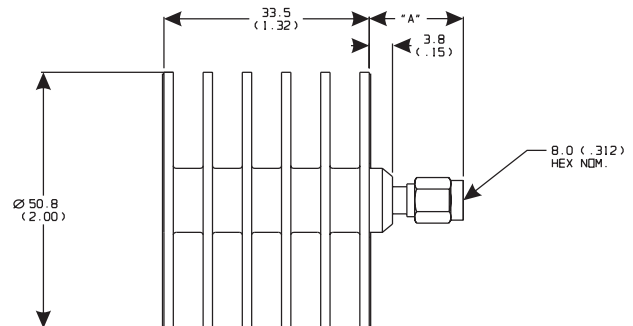
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: 3.5mm connectors - mate nondestructively with SMA per MIL-C-39012, 2.92mm, and other 3.5mm connectors. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: 100 g (5.2 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1444-1	15.0 (0.59)	3.5mm female
1444-2	16.0 (0.63)	3.5mm male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1446
Model 1447
Medium Power Coaxial Terminations

25 Watts
50 Watts
dc to 5.0 GHz

7/16 Connector, Low Intermodulation Design



Features

- /// Optimized for Wireless OEM and Test Applications.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Custom Designs Available.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 5.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 5	1.20

POWER RATING: (mounted horizontally assuming unobstructed air flow and natural convection around unit)

Model 1446: 25 watts **average** @ 25°C ambient temperature, derated linearly to 2.5 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 0.25% duty cycle).

Model 1447: 50 watts **average** to 25°C ambient temperature, derated linearly to 5 watts @ 125°C. 5 kilowatt **peak** (5 μ sec pulse width; 0.05% duty cycle).

INTERMODULATION: IM3 (Reflected) = -100 dBc with two +43 dBm Input Tones @ 869 MHz and 891 MHz.

TEMPERATURE RANGE: -55°C to 125°C.

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

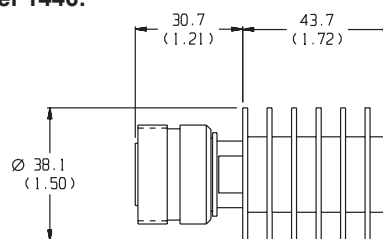
CONNECTOR: 7/16 connector that conforms to DIN 47 223, IEC 1694, VG 95250, CECC 22190. Choice of 7/16 male(-2) of 7/16 female (-1) connector

CONSTRUCTION: Black, finned aluminum body, silver plated brass connector.

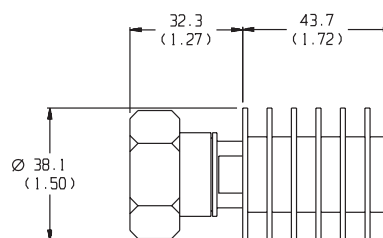
WEIGHT: Model 1446: Net 216 g (7.6 oz) maximum
 Model 1447: Net 354 g (12.5 oz) maximum

PHYSICAL DIMENSIONS:

Model 1446:

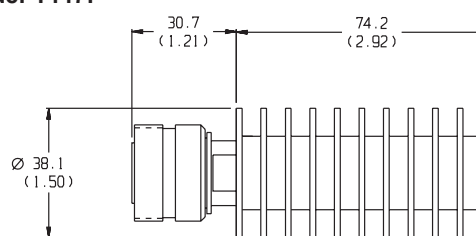


MODEL NO. 1446-1 FEMALE

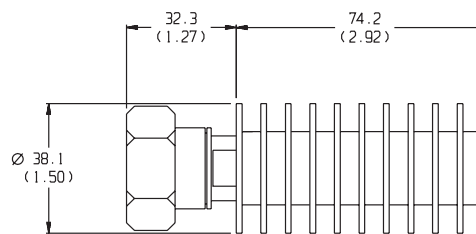


MODEL NO. 1446-2 MALE

Model 1447:



MODEL NO. 1447-1 FEMALE



MODEL NO. 1447-2 MALE

NOTE: All dimensions are given in mm (inches) and tolerances are X.X+0.8 (0.3) unless otherwise specified.

Model 1441 Medium Power Coaxial Terminations

dc to 4.0 GHz
50 Watts

Type N Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Rugged Construction** - Quality connector with special high temperature support bead.
- /// **Ideal for Wireless Applications.**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 4.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.15

POWER RATING: 50 watts **average**, 5 kilowatts **peak** (5 μ sec pulse width; 0.5% duty cycle) with case temperature held within **100°C maximum** with appropriate conductive heatsink.

TEMPERATURE RANGE: -55°C to 100°C case.

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

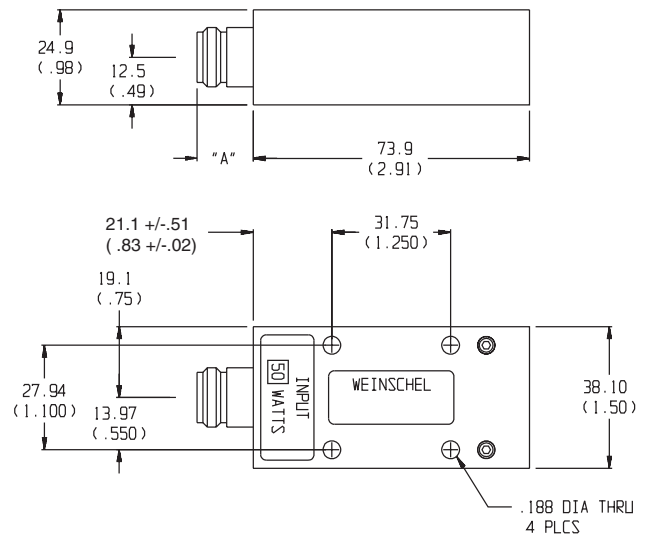
CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mates nondestructively with MIL-C-39012 connector. Choice of male (-4) or female (-3) connector.

CONSTRUCTION: Aluminum alloy body, stainless steel connector; gold plated beryllium copper contacts.

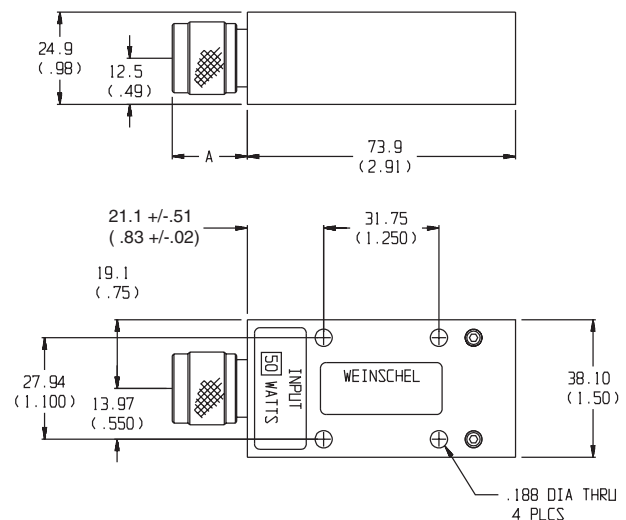
WEIGHT: Net 170g (6 oz.) maximum

PHYSICAL DIMENSIONS:

Model 1441-3:



Model 1441-4



Model #	DIM A	Connector Type
1441-3	15.0 (0.59)	N female
1441-4	22.9 (0.90)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1426 Medium Power Coaxial Terminations

dc to 8.5 GHz
50 Watts

Type N or 2.92mm Connectors



Features

- /// **Rugged Construction.**
- /// **Rugged Construction** - Quality connector with special high temperature support bead.
- /// **Low Intermodulation Option**
- /// **5 Kilowatts Peak Power**

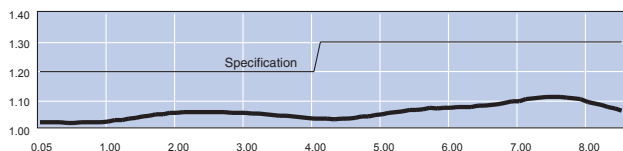
Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 8.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.20
4 - 8.5	1.30



Typical 1426-4 SWR Performance

POWER RATING: 50 watts **average** (mounted **horizontally**) to 25°C ambient temperature, derated linearly to 0 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 0.05% duty cycle).

INTERMODULATION (Model 1426-X-LIM Only): IM3 (Reflected) = -100 dBc with two input signals @ 869 MHz and 891 MHz with an average power of +41 dBm each.

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

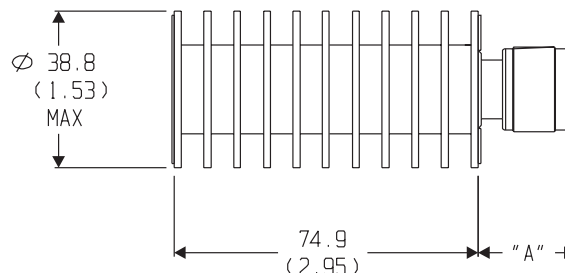
CONNECTOR: Type N or 2.92mm connectors mate nondestructively with MIL-C-39012 connector.

Connector Options	Type/Description
1	2.92mm, Female
2	2.92mm, Male
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contacts and stainless steel male contacts.

WEIGHT: Net 280 g (10 oz.)

PHYSICAL DIMENSIONS:

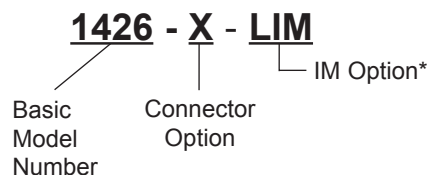


Model #	DIM A	Connector Type
1426-1	12.7 (0.50)	2.92mm female
1426-2	14.0 (0.55)	2.92mm male
1426-3	15.0 (0.59)	N female
1426-4	22.9 (0.90)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MODEL NUMBER DESCRIPTION:

Example:



* Add -LIM to entire model number for Low Intermodulation option. Option not available through Express.

Model 1430 Medium Power Coaxial Terminations

dc to 18.0 GHz
50 Watts

3.5mm or Type N Connector



Features

- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Rugged injection molded connector.
- /// 1 Kilowatt Peak Power

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 8	1.15
8 - 18	1.30

POWER RATING: 50 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 5 watts @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 2.5% duty cycle).

INTERMODULATION (Model 1430-X-LIM Only): IM3 (Reflected) = -100 dBc with two input signals @ 869 MHz and 891 MHz with an average power of +43 dBm each.

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

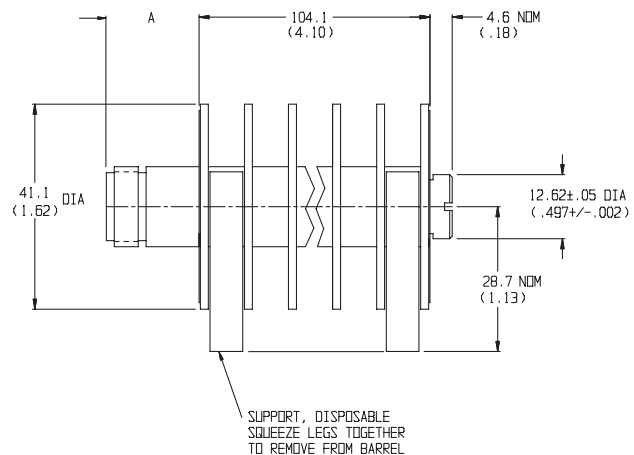
CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

3.5mm connector mate nondestructively with SMA per MIL-C-39012, 2.92mm and other 3.5mm connector. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contact or stainless steel male contact.

WEIGHT: 175 g (6 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1430-1	13.2 (0.52)	3.5mm female
1430-2	14.0 (0.55)	3.5mm male
1430-3	18.3 (0.72)	N female
1430-4	23.1 (0.91)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MODEL NUMBER DESCRIPTION:

Example:

1430 - X - LIM
 Basic Model Number Connector Option IM Option*

* Add -LIM to entire model number for Low Intermodulation option.

Models 1457 & 1458 Medium Power Coaxial Terminations

dc to 18.0/22.0 GHz
50 Watts



Convection Cooled, 3.5mm & TNC Connectors



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Rugged Construction** - Quality connector with special high temperature support bead.
- /// **Ideal for Space & Airborne Applications**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: Model 1457: dc to 18.0 GHz
Model 1458: dc to 22.0 GHz

MAXIMUM SWR:

Frequency (GHz)	Model	SWR
dc - 18.0	1457	1.30
dc - 22.0	1458	1.30

POWER RATING: 50 watts **average**, 5 kilowatts **peak** (1 μ sec pulse width; 0.5% duty cycle) with case temperature held within **90°C maximum** with appropriate conductive heatsink.

TEMPERATURE RANGE: -55°C to 90°C case.

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: **Model 1457:** TNC connectors per MIL-STD-348 interface dimensions - mates nondestructively with MIL-C-39012 connector. Choice of male (-7) or female connector (-6)

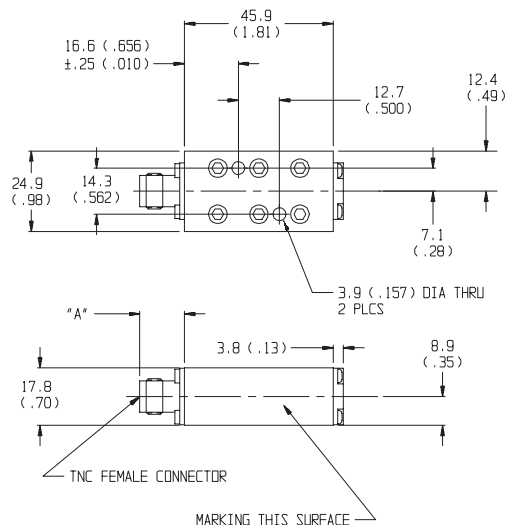
Model 1458: 3.5mm connectors - mate nondestructively with SMA per MIL-C-39012, 2.92mm, and other 3.5mm connectors. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Aluminum alloy body, stainless steel connector; gold plated beryllium copper contacts.

WEIGHT: **Model 85:** Net 64 g (2.2 oz) maximum
Model 86: Net 56 g (1.9 oz) maximum

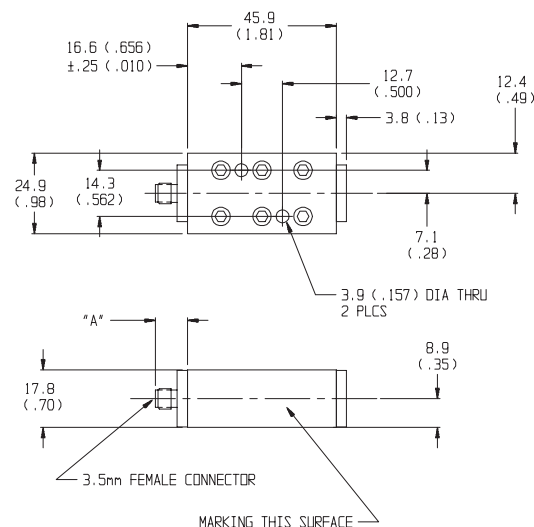
PHYSICAL DIMENSIONS:

Model 1457 (TNC):



Model #	DIM A	Connector Type
1457-6	13.8±0.25 (0.546±0.01)	TNC female
1457-7	18.9±0.25 (0.744±0.01)	TNC male

Model 1458 (3.5mm)



Model #	DIM A	Connector Type
1458-1	9.9±0.5 (0.35±0.02)	3.5mm female
1458-2	13.4±0.5 (0.53±0.02)	3.5mm male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1440 High Power Coaxial Terminations

dc to 4.0 GHz
100 Watts

Type N Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Low SWR**
- /// **Rugged Construction** - Quality connector with special high temperature support bead.
- /// **Ideal for Wireless Applications.**

Specifications

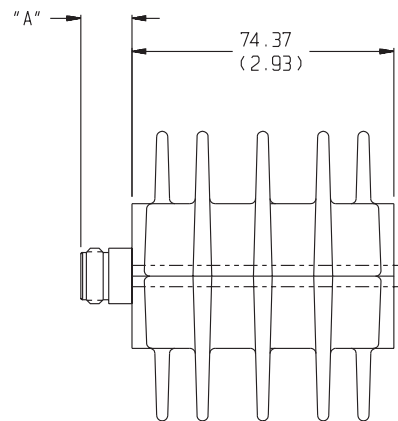
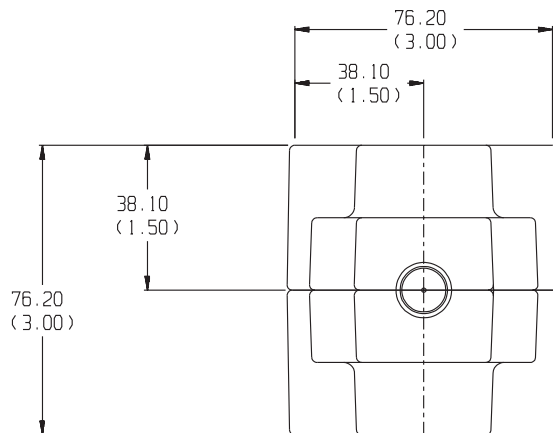
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 4.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.15

PHYSICAL DIMENSIONS:



SUGGESTED ORIENTATION
OF FINS TO BE VERTICAL

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model #	DIM A	Connector Type
1440-3	15.0 (0.59)	N female
1440-4	22.9 (0.90)	N male

Model 1442 High Power Coaxial Terminations

dc to 8.5 GHz
100 Watts

Type N Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Rugged Construction** - Quality connector with special high temperature support bead.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 8.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.20
4 - 8.5	1.30

POWER RATING (mounted horizontally with fins vertical): 100 watts **average** to 35°C ambient temperature, derated linearly to 10 watts @ 125°C. 5 kilowatts **peak** (5 μ sec pulse width; 1.0% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

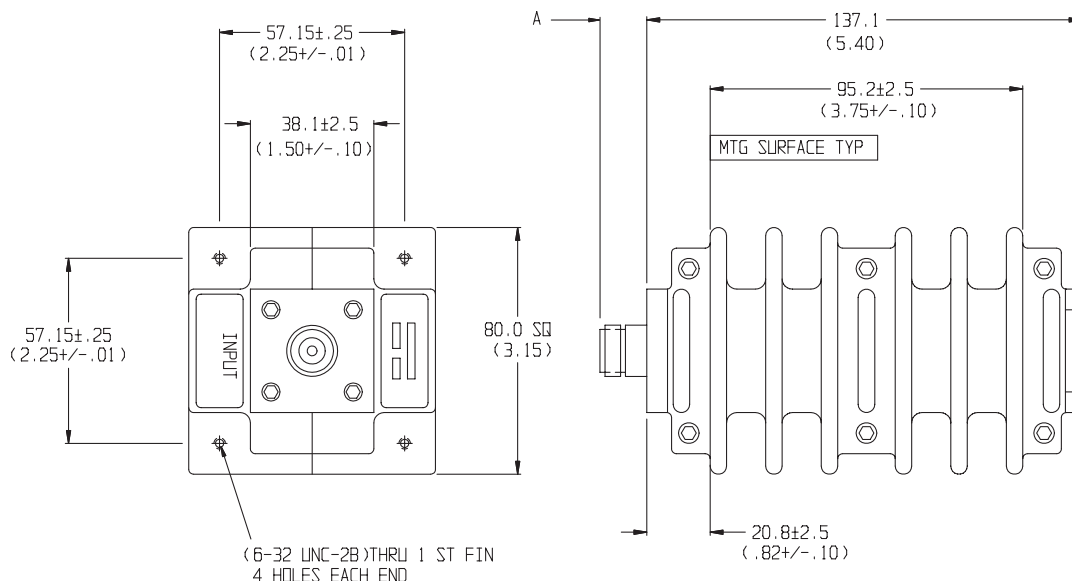
CALIBRATION: SWR testing performed across the frequency range. Test data available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contact or stainless steel male contact.

WEIGHT: 1,130 g (2 lbs, 8 oz)

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model #	DIM A	Connector Type
1442-3	15.0 (0.59)	N female
1442-4	22.9 (0.90)	N male

Model 1431 High Power Coaxial Terminations

dc to 18.0 GHz
100 Watts

3.5mm or Type N Connector



Features

- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Rugged injection molded connector.
- /// 1 Kilowatt Peak Power

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 8	1.20
8 - 18	1.30

POWER RATING: 100 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 10 watts @ 125°C. 1 kilowatt **peak** (5 μ sec pulse width; 5% duty cycle).

INTERMODULATION (Model 1431-X-LIM Only): IM3 (Reflected) = -100 dBc with two input signals @ 869 MHz and 891 MHz with an average power of +43 dBm each.

TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

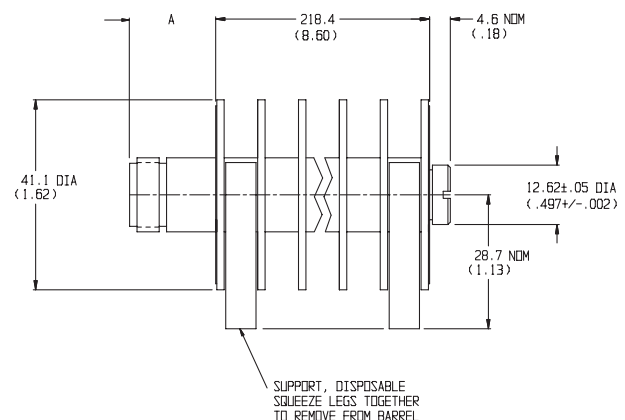
CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

3.5mm connector mates nondestructively with SMA per MIL-C-39012, 2.92mm and other 3.5mm connector. Choice of male (-2) or female connector (-1).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper contact or stainless steel male contact.

WEIGHT: 320 g (11 oz)

PHYSICAL DIMENSIONS:



Model #	DIM A	Connector Type
1431-1	13.2 (0.52)	3.5mm female
1431-2	14.0 (0.55)	3.5mm male
1431-3	18.3 (0.72)	N female
1431-4	23.1 (0.91)	N male

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MODEL NUMBER DESCRIPTION:

Example:

1431 - X - LIM

Basic Model Number Connector Option IM Option*

* Add -LIM to entire model number for Low Intermodulation option.

Model 1428
Model 1435
High Power Coaxial Terminations

dc to 1.5 GHz
dc to 5.0 GHz
150 Watts

Type N Connector



Features

- /// **Low SWR** - Maximum SWR remains low through full frequency and power range.
- /// **Rugged Construction** - Quality connector with special high temperature support beads.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: Model 1428: dc to 1.5 GHz
Model 1435: dc to 5.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 2	1.10
2 - 5	1.15

POWER RATING: 150 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 15 watts @ 125°C. 10 kilowatts **peak** (5 μ sec pulse width; 0.75% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

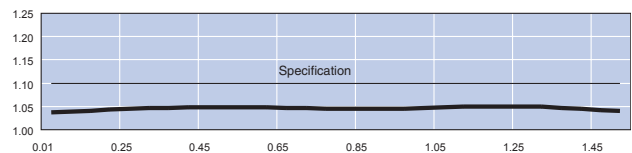
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector.

Model 1428: Add M for male or F for female
Model 1435: Add -4 for male or -3 for female

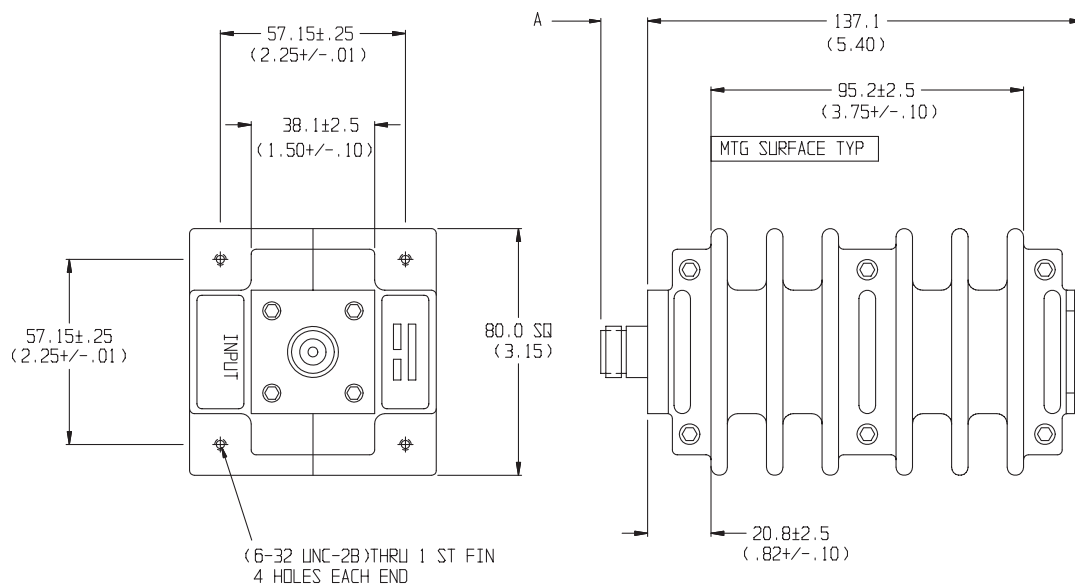
CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contact or stainless steel male contact.

WEIGHT: 1,130 g (2 lbs, 8 oz)



Typical M1428 SWR Performance

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model #	DIM A	Connector Type
F1428, 1435-3	15.0 (0.59)	N female
M1428, 1435-4	22.9 (0.90)	N male

Model 1448 High Power Coaxial Terminations

dc to 5.0 GHz
150 Watts

Convection Cooled



Features

- /// Optimized for Wireless OEM and Test Applications.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Custom Designs Available.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 5.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 5	1.25

INTERMODULATION: Third Order Reflected Levels (IM3), -100 dBc with two input signals @ 869 MHz and 891 MHz with average carrier power levels of +43 dBm each.

POWER RATING: 150 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 15 watts @ 125°C. 10 kilowatts **peak** (5 μ sec pulse width; 0.75% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C

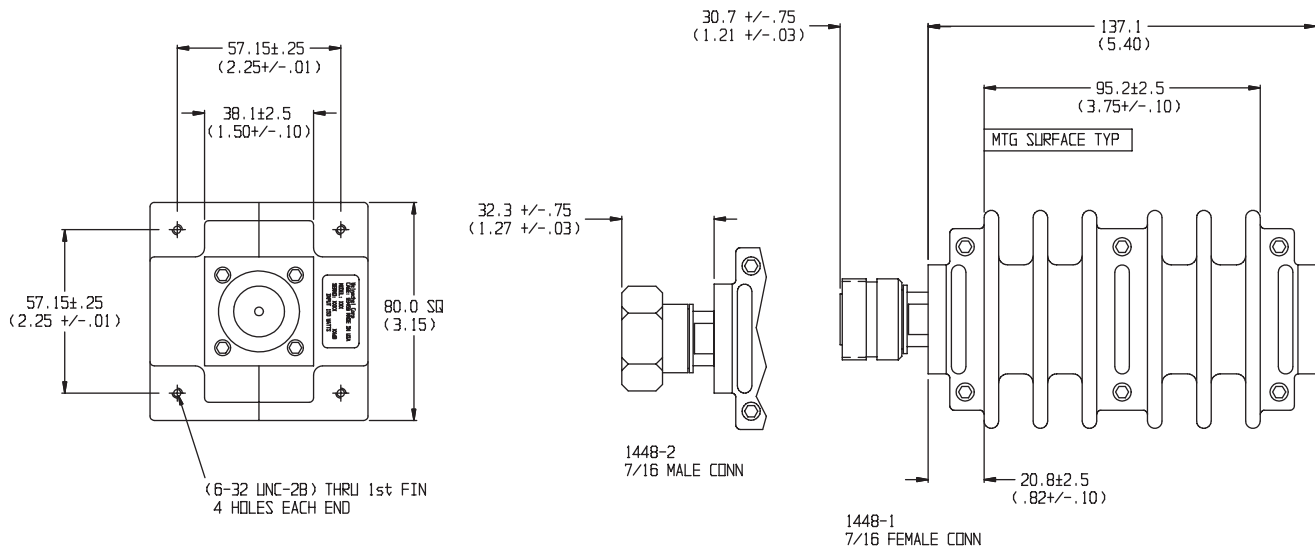
CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: 7/16 connector that conforms to DIN 47 223, IEC 1694, VG 95250, CECC 22190. Choice of 7/16 male (-2) of 7/16 female (-1) connector.

CONSTRUCTION: Black, finned aluminum body, silver plated brass connector.

WEIGHT: 1,248 g (2.75 lbs)

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1439

High Power Coaxial Terminations

dc to 2.5 GHz
150 Watts

Type N Connector



Features

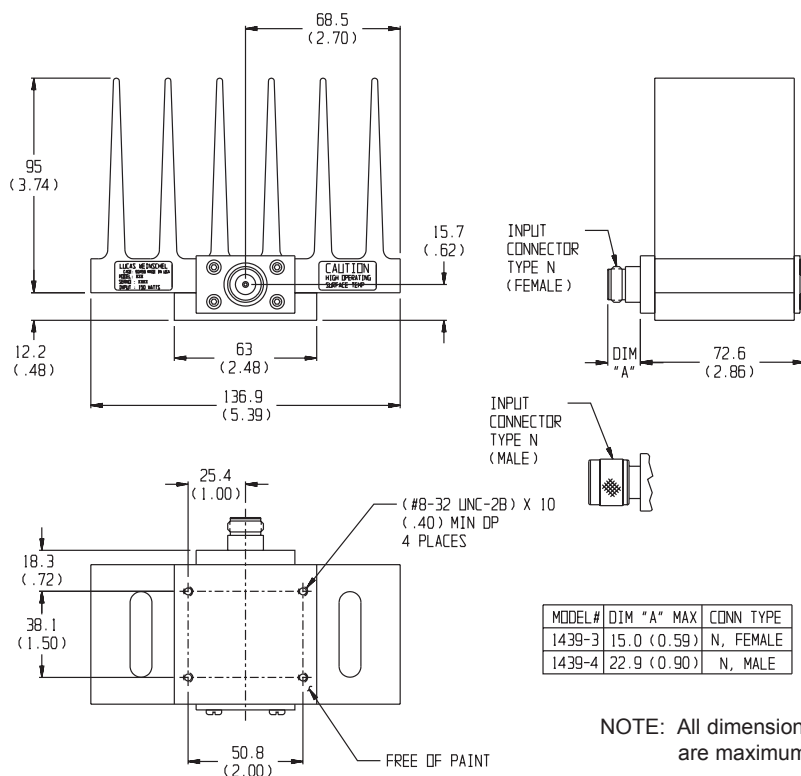
- /// **Compact Construction** - Lowest size/power ratio.
- /// **Flexible Mounting Position** - The units may be mounted in horizontal (fins up) or vertical position.
- /// **Rugged Construction** - Quality connector with special high temperature support bead.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 2.5 GHz

PHYSICAL DIMENSIONS:



MAXIMUM SWR*:

Frequency (GHz)	SWR
dc - 2.5	1.20

POWER RATING: 150 watts average (mounted horizontally or vertically assuming unobstructed air flow and natural convection around unit), 10 kilowatts peak (5 μ sec pulse width; 0.75% duty cycle). Case temperature must be held to **100°C maximum**.

TEMPERATURE RANGE: -55°C to 100°C case

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contact or stainless steel male contact.

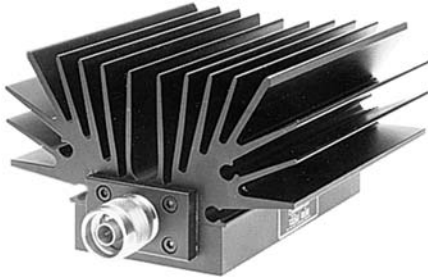
WEIGHT: 850 g (1 lb, 14 oz)

NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1432 High Power Coaxial Terminations

dc to 8.5 GHz
150 Watts

Type N Connector



Features

- /// **Flexible Mounting Position** - The units may be mounted in horizontal (fins up) or vertical position.
- /// **Rugged Construction** - Quality connector with special high temperature support bead.

Specifications

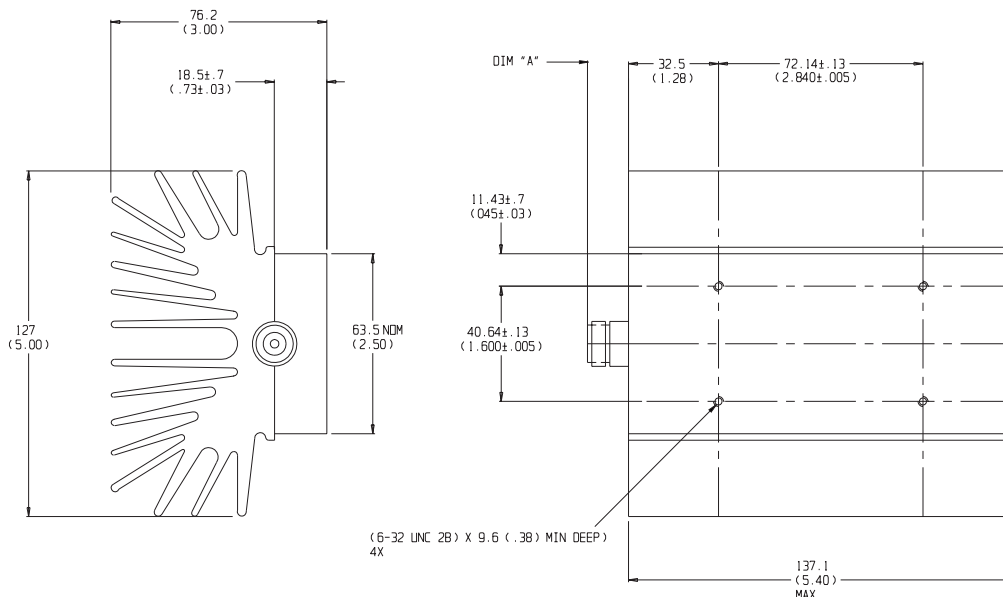
NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 8.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 4	1.20
4 - 8.5	1.30

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

POWER RATING: 150 watts average (mounted horizontally or vertically assuming unobstructed air flow and natural convection around unit) to 25°C ambient temperature, derated linearly to 15 watts @ 125°C. 5 kilowatts peak (5 μ sec pulse width; 1.5% duty cycle).

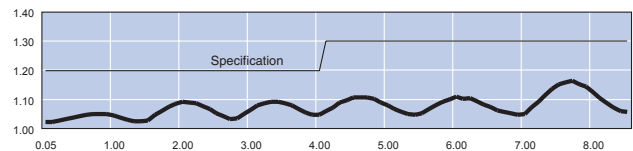
TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female (-3) connector.

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contacts and stainless steel male contacts.

WEIGHT: 1,450g (3 lbs., 3 oz.)



Typical M1432 SWR Performance

Model #	DIM A	Connector Type
1432-3	15.0 (0.59)	N female
1432-4	22.9 (0.90)	N male

Model 1433 High Power Coaxial Terminations

dc to 5.0 GHz
250 Watts

Type N Connector



Features

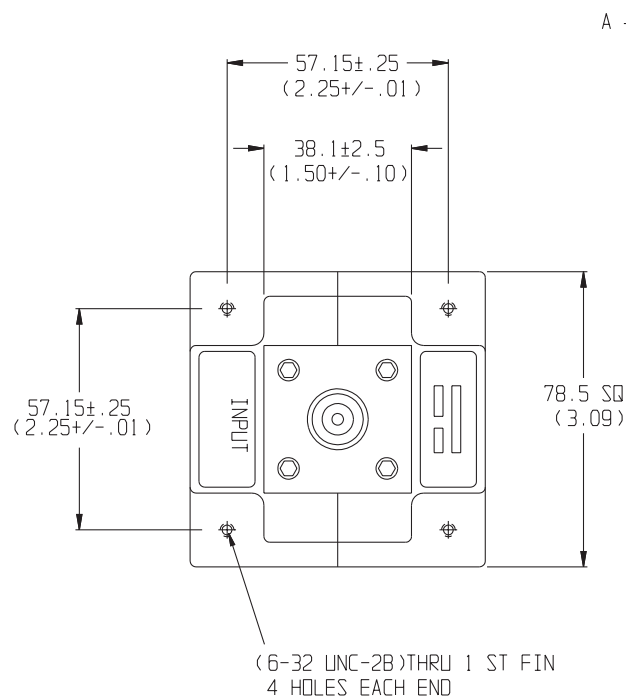
- /// **Compact Construction** - Lowest size/power ratio.
- /// **Low SWR** - Maximum SWR remains low through full frequency and power range.
- /// **Operates down to dc.**
- /// **Rugged Construction** - Quality connector with special high temperature support beads.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 5.0 GHz

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 2	1.10
2 - 5	1.15

POWER RATING: 250 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 25 watts @ 125°C. 10 kilowatts **peak** (5 μ sec pulse width; 2.5% duty cycle).

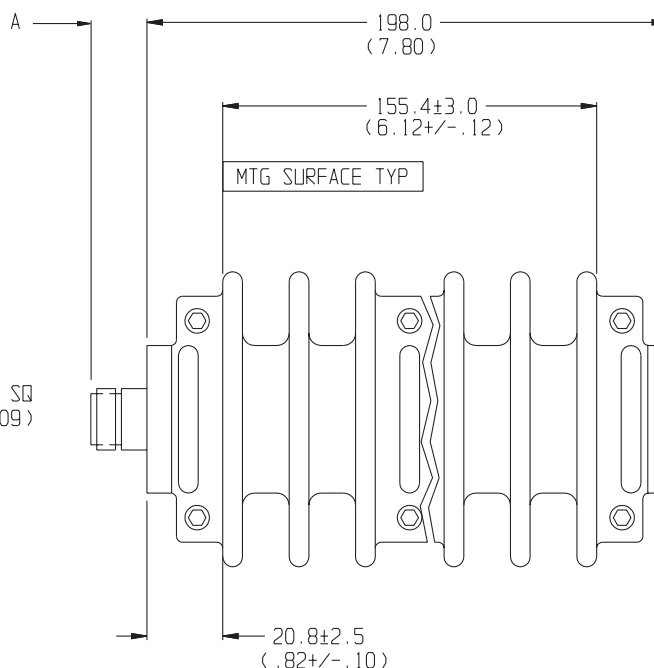
TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female connector (-3).

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contact or stainless steel male contact.

WEIGHT: Net 1,530 g (3 lbs., 6 oz.) maximum

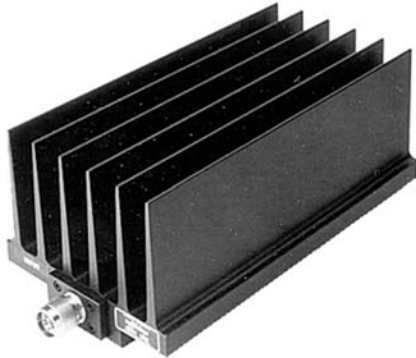


Model #	DIM A	Connector Type
1433-3	15.0 (0.59)	N female
1433-4	22.9 (0.90)	N male

Model 1434 High Power Coaxial Terminations

dc to 2.5 GHz
500 Watts

Type N Connector



Features

- /// **Compact Construction** - Lowest size/power ratio.
- /// **Low SWR** - Maximum SWR remains low through full frequency and power range.
- /// **Operates down to dc.**
- /// **Rugged Construction** - Quality connector with special high temperature support bead.

Specifications

NOMINAL IMPEDANCE: 50 Ω
FREQUENCY RANGE: dc to 2.5 GHz
PHYSICAL DIMENSIONS:

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 2.5	1.10

POWER RATING: 500 watts **average** (mounted horizontally assuming unobstructed air flow and natural convection around unit) @ 25°C ambient temperature, derated linearly to 50 watts @ 125°C. 10 kilowatts **peak** (5 μ sec pulse width; 2.5% duty cycle).

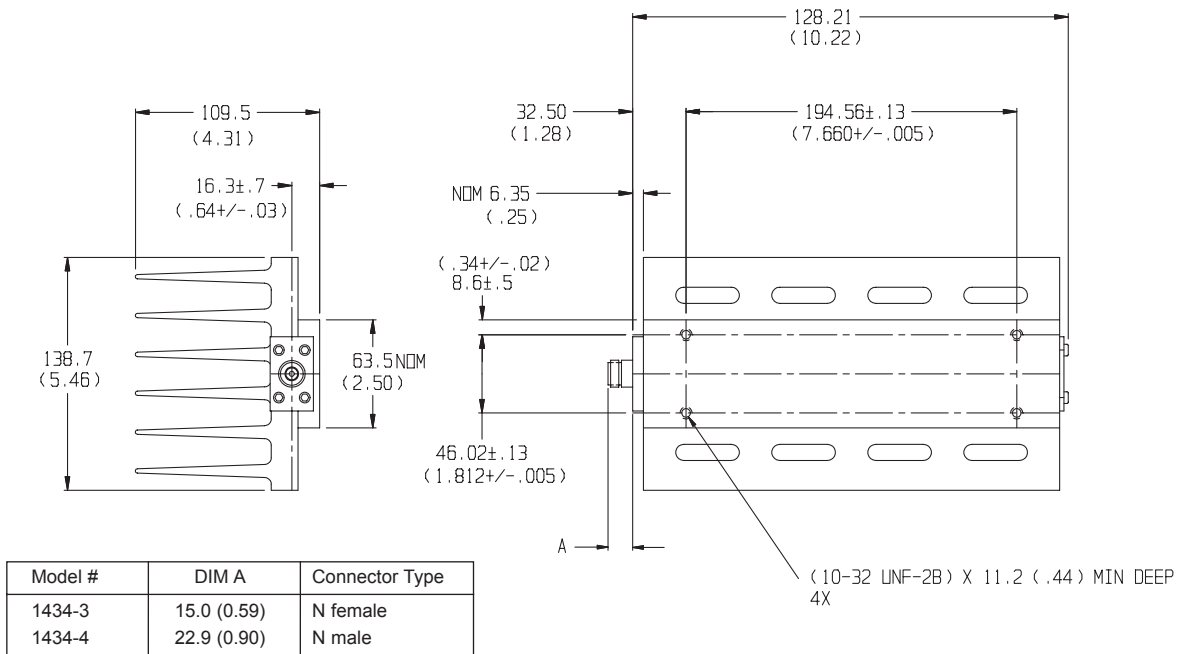
TEMPERATURE RANGE: -55°C to +125°C

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

CONNECTOR: Type N connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector. Choice of male (-4) or female (-3) connector.

CONSTRUCTION: Black, finned aluminum body, stainless steel connector; gold plated beryllium copper female contacts and stainless steel male contacts.

WEIGHT: 3,640 g (8 lbs.)



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model 1456 High Power Coaxial Terminations

dc to 3.0 GHz
1,000 Watts

Choice of Type N or 7/16 Connectors...



Features

- /// Quality Type N connectors with special high temperature support beads.
- /// Designed to meet environmental requirements of MIL-D-39030.
- /// Low Intermodulation Distortion Design

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 3.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 1.5	1.15
1.5 - 3.0	1.25

POWER RATING: 1,000 watts **average** (assuming unobstructed air flow and natural convection around unit) to 25°C ambient temperature, derated linearly to 100 watts @ 125°C. 10 kilowatt **peak** (5 μ sec pulse width; 5% duty cycle).

TEMPERATURE RANGE: -55°C to +125°C with Power derating applied.

CALIBRATION: SWR Testing performed across the frequency band. Test data is available at additional cost.

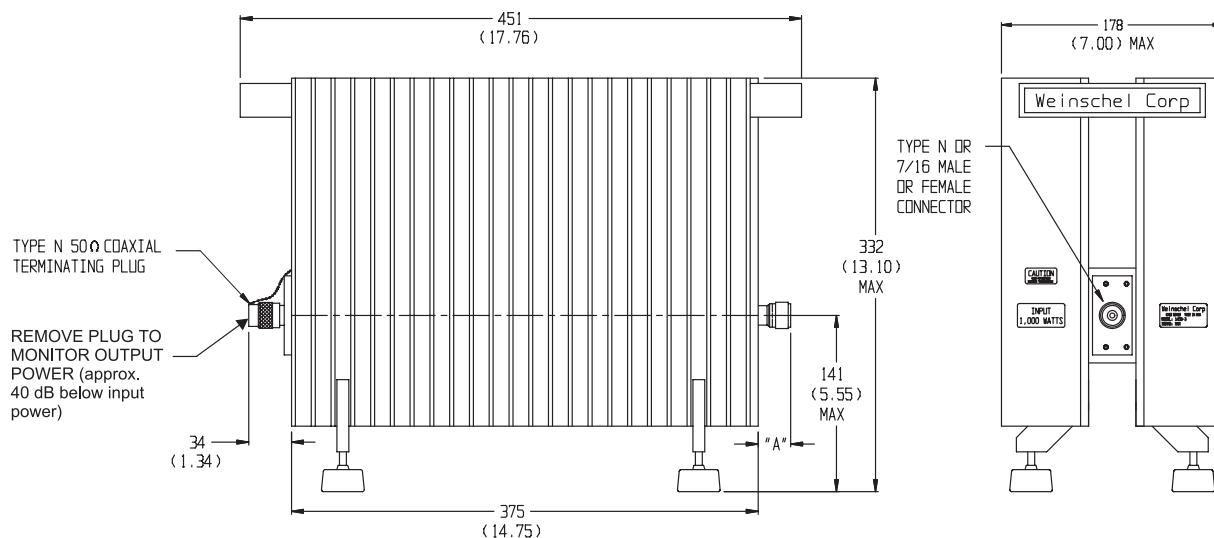
CONNECTOR: Type N connectors - mate nondestructively with MIL-C-39012 connector or 7/16 connector that conforms to DIN 47223, IEC 169-4, VG 95250, CECC 22 190.

Connector Options	Type/Description
1	7/16, Female
2	7/16, Male
3	Type N, Female
4	Type N, Male

CONSTRUCTION: Black, finned aluminum body, stainless steel or silver plated brass connectors with gold plated beryllium copper or silver plated contacts.

WEIGHT: Net 12.10 kg (34 lbs) maximum

PHYSICAL DIMENSIONS:



NOTE: All dimensions are given in mm (inches) and are maximum, unless otherwise specified.

Model #	DIM A	Connector Type
1456-1	30.7 (1.21)	7/16 female
1456-2	32.3 (1.27)	7/16 male
1456-3	15.0 (0.59)	N female
1456-4	22.9 (0.90)	N male