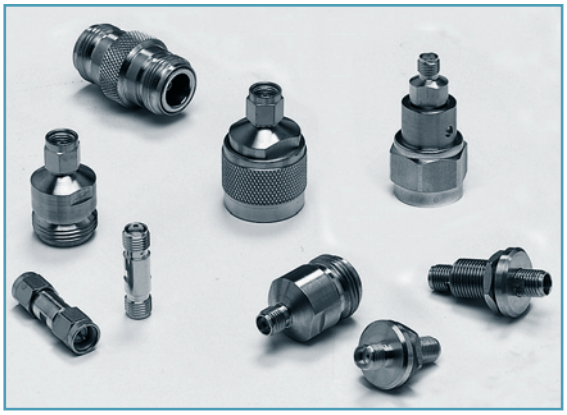
Coaxial Adapters



- High Repeatability & Low SWR
- Rugged Injection Molded Connectors.
- Bulkhead Mounting - Model 1568 conveniently mounts on any panel using a standard D-hole.
- In-Series & Between Series Configurations - Type N or SMA
- Precision Connectors & Rugged Construction

General Information

In this section of the catalog, each product 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 product(s) that fits your needs. The page number for each product data sheet is given in the quick reference guide.

The superior performance Aeroflex / Weinschel components enjoy is due to our connector design capabilities. Utilizing proprietary design techniques, we offer connectorized devices that are mechanically robust, stable over environmental extremes, and highly reliable. Aeroflex / Weinschel offers a comprehensive line of between-series adapters, blind-mate connectors, and our patented PLANAR CROWN® Connector System.

NOTE: ***EXPRESS*** Shipment available via **www.argosysales.com** or 800-542-4457. Check with distributor for current products and stocking quantities.

Revision Date: 3/10/09

Precision Adapters...dc-26.5 GHz

MODEL NUMBER	CONNECTOR TYPE	FREQUENCY RANGE	SWR (MAXIMUM)	INSERTION LOSS	REPEATABILITY	Page No.	
☆ F1513 ☆ M1513	N female - N female N male - N male	dc - 18	1.10-1.15*	<0.25	0.020 dB	236	
☆ 1548-13 1548-14 1548-23 ☆ 1548-24	SMA female - N female SMA female - N male SMA male - N female SMA male - N male	dc - 18	1.10	0.43 (maximum) per mated pair	Type N: 0.006-0.010* SMA: 0.010-0.020*	238	
☆ 1568 ☆ 1568-1	SMA (female-female) bulkhead (add -1 to model number for stainless steel)	dc - 26.5	1.15-1.20*	<0.30 - <0.50*	0.010-0.020*	234	
☆ 1587 ☆ 1588 ☆ 1589	SMA female - SMA female SMA male - SMA female SMA male - SMA male	dc - 26.5	1.15-1.20*	<0.30 - <0.50*	0.010-0.020*	235	
☆ 7002-13 ☆ 7002-14 ☆ 7002-23 ☆ 7002-24	SMA female to N female SMA female to N male SMA male to N female SMA male to N male	dc - 18	1.12	<0.40 - <0.50*	0.010-0.020*	237	

☆ *EXPRESS* Shipment available via **www.argosysales.com** or 800-542-4457.
Note: Other models may also be available from Express delivery.

* VARIES WITH FREQUENCY

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Frequently Asked Questions about Adapters Precision Connector Systems...

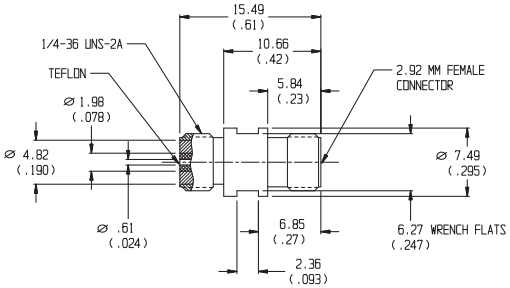
What types of adapters and/or connectors does Aeroflex / Weinschel offer?

Aeroflex / Weinschel offers a wide variety of precision SMA, 2.92mm, Type N, 3.5mm, 2.4mm and male, female, and sexless combinations of adapters from which to choose. Also, Aeroflex / Weinschel manufactures a wide range of Blind-mate Connectors and our own PLANAR CROWN® Connector System. All Aeroflex / Weinschel components are designed and manufactured to obtain low SWR and excellent repeatability over the longest possible operational life. Other features of Aeroflex / Weinschel Adapters and Connectors include:

1. High Repeatability.
2. Quality Connectors - SMA, Type N, 3.5mm, 2.92mm, and 2.4mm.
3. Bulkhead Mounting Available
4. Broad Frequency Range - dc to 40 GHz.

What are Blind-mate Connectors and where would I use them?

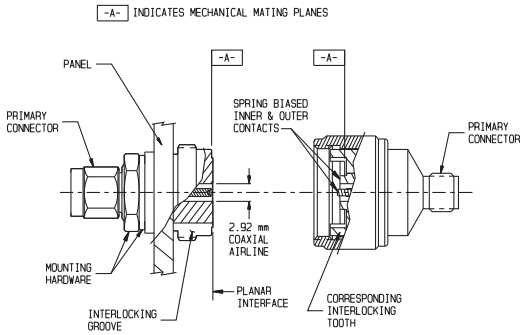
Aeroflex / Weinschel Blind-mate connector series provides threadless connector mating which is useful when mating an array of connectors on one RF module to another array within seconds. Each connector pair will tolerate a radial and axial offset of 0.02 inch and still meet all of its electrical specifications. These connectors simplify RF connections in the most inaccessible regions and high package density systems where conventional threaded connector mating is extremely difficult.



What is difference between Aeroflex / Weinschel precision SMA/ 2.92mm connectors and other SMA connectors?

Typical commercial SMA connectors may have a useful SWR to 18 or 26 GHz; however, most absorb energy between 22 and 25 GHz due to TEM mode conversion. A mated pair could have between 0.5 dB to 2.0 dB insertion loss. A mated pair of Aeroflex / Weinschel Precision Miniature connectors (2.92mm), which mate with SMA type connectors, have a VSWR of less than 1.25 and an insertion loss of less than 0.5 dB to 26 GHz. The new 2.92mm expands this range to 40 GHz.

What is the advantages of using Aeroflex / Weinschel PLANAR CROWN® connectors?.



The Aeroflex / Weinschel PLANAR CROWN® Universal Connector System incorporates design and application features that eliminate the mechanical, electrical and economical drawbacks of standard bulkhead connectors, connector savers, cable connectors and adapters. In one standard design, it has resolved connector related problems faced by users and manufacturers of instruments, cables and components, how to quickly and inexpensive to change connector series or replace damaged front panel connectors on instruments. This system features an operating frequency range of dc to 40 GHz; ability to maintain calibration integrity when changing connector types; and compatibility with all Type N, TNC, GPC-7, SMA, 2.92mm, and 2.4mm connectors used throughout the microwave industry.

What is a Ruggedized SMA Connector?

All Aeroflex / Weinschel SMA connectors labeled as ruggedized have a dielectric insulator at the interface of the connector to provide additional support for the center conductor during connects and disconnects and to keep out foreign material. This provides an important benefit--improved axial alignment of the center contact. This substantially reduces finger breakage of the female contact. Longevity of the Aeroflex / Weinschel SMA connector is enhanced because of the increased shoulder-wall thickness of the male connector shell. Typically, a standard SMA male connector shell has a 0.0065 inch wide shoulder. Compare that to 0.018 inch for the Aeroflex / Weinschel SMA series. The shoulder of most SMA male connectors gradually collapses from use. This causes the center contact to exceed the maximum height tolerance and eventually destroys the mating female contact. This will not happen with a Aeroflex / Weinschel SMA connector.

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Model 1568 & 1568-1 dc to 26.5 GHz Precision Coaxial Panel Adapters

Ruggedized SMA Connectors (female to female)

RoHS

Features

- **High Repeatability.**
- **Rugged Injection Molded Connectors.**
- **Bulkhead Mounting** - Conveniently mounts on any panel using a D-hole shown below. Extra heavy construction for long life even with mistreatment makes this adapter suitable for instrument and subsystem front panel applications.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 26.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.15
18 - 26.5	1.20

INSERTION LOSS & REPEATABILITY (dB):

Frequency (GHz)	Ins Loss	Repeatability
dc - 12.4	< 0.30	0.01
12.4 - 18	< 0.40	0.02
18.0 to 26.5	< 0.50	0.02

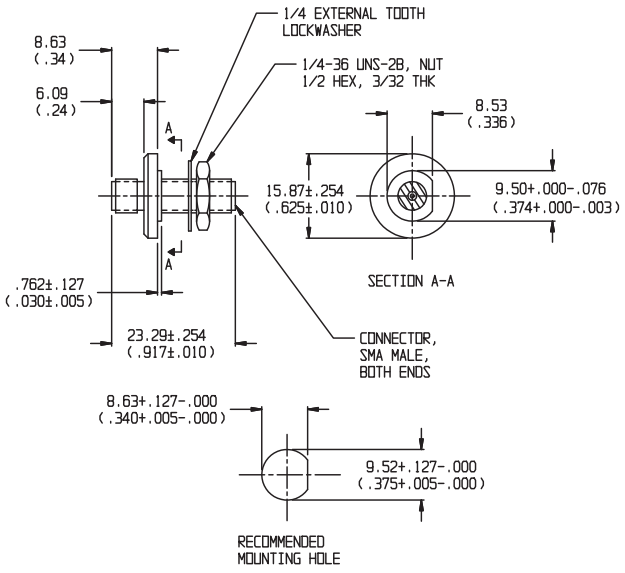
TEMPERATURE RANGE: -55°C to +100°C

CONSTRUCTION: Inner and outer conductors: heat treated beryllium copper, gold plated. Mounting hardware provided (Hex nut and lockwasher) Add -1 to model number for the optional stainless steel body.

CONNECTORS: SMA connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

WEIGHT: 56.7 g (2 oz) maximum

PHYSICAL DIMENSIONS:



NOTE:

1. All dimensions are given in mm (inches) and are maximum, unless otherwise specified.
2. Unit available with RoHS compliant materials, specify when ordering.

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Revision Date: 3/10/09

AEROFLEX WEINSCHEL

Models 1587, 1588 & 1589 Precision Coaxial Adapters

dc to 26.5 GHz

Ruggedized SMA to SMA Connectors

RoHS

Features

- **High Repeatability.**
- **Rugged Injection Molded Connectors.**
- **Designed for Measurement System Use** - Auxiliary wrench flats aid in torquing connections without "chain reaction" loosing of multiple component hookups.

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 26.5 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR
dc - 18	1.15
18 - 26.5	1.20

INSERTION LOSS & REPEATABILITY (dB):

Frequency (GHz)	Ins Loss	Repeatability
dc - 12.4	< 0.30	0.01
12.4 - 18	< 0.40	0.02
18 to 26.5	< 0.50	0.02

TEMPERATURE RANGE: -55°C to +100°C

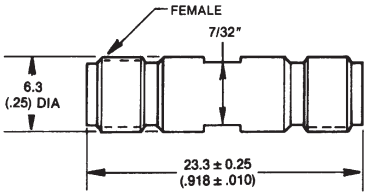
CONSTRUCTION: Inner and outer conductors: heat treated beryllium copper, gold plated.

CONNECTORS: SMA connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

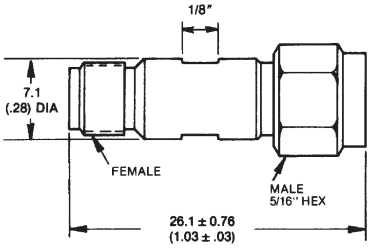
WEIGHT: 56.7 g (2 oz) maximum

PHYSICAL DIMENSIONS:

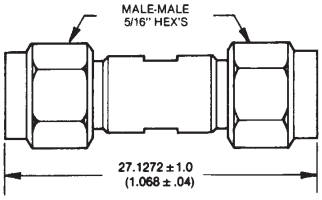
MODEL 1587:



MODEL 1588:



MODEL 1589:



NOTE:

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2. Unit available with RoHS compliant materials, specify when ordering.

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Revision Date: 3/10/09

Model 1513
Precision Coaxial Adapter

dc to 18.0 GHz

Type N to Type N

Features

- **Low SWR.**
- **High Repeatability.**
- **Stainless Steel Construction.**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:	
Frequency (GHz)	SWR
dc - 10	1.10
10 - 18	1.15

INSERTION LOSS & REPEATABILITY (dB):		
Frequency (GHz)	Maximum Ins Loss	Repeatability (Typical)
dc - 18	< 0.25	0.02

TEMPERATURE RANGE: -55°C to +85°C

CONSTRUCTION: Stainless Steel body, beryllium copper, gold plated contacts.

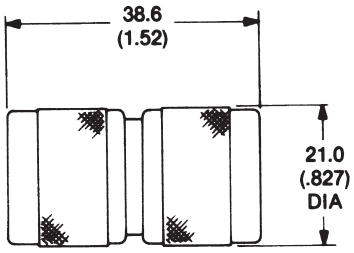
CONNECTORS: Type N per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors. Select model number as follows:

Model M1513: male to male
Model F1513: female to female

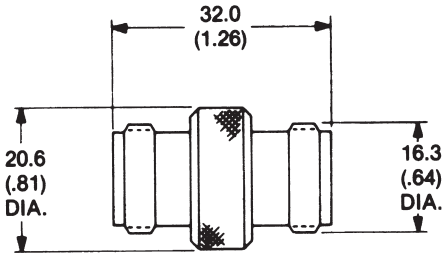
WEIGHT: Model M1513: 50 g (1.7 oz) maximum
Model F1513: 40 g (1.4 oz) maximum

PHYSICAL DIMENSIONS:

MODEL M1513:



MODEL F1513:



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

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Revision Date: 3/10/09

AEROFLEX WEINSCHEL

Model 7002
High Performance Coaxial Adapter

dc to 18.0 GHz

Ruggedized SMA to Type N Connectors

RoHS

Features

- **High Repeatability**
- **Rugged Injection Molded Connectors**
- **Stainless Steel Construction**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR (per adapter)
dc - 18	1.12

INSERTION LOSS & REPEATABILITY (dB):

Frequency (GHz)	Ins Loss*	Repeatability*
dc - 12.4	< 0.40	0.01
12.4 - 18	< 0.50	0.02

*Specification based on mated pair terminated in 50 Ω.

ELECTRICAL LENGTH:

Models 7002-14 & 7002-24: 33mm
Models 7002-13 & 7002-23: 20mm

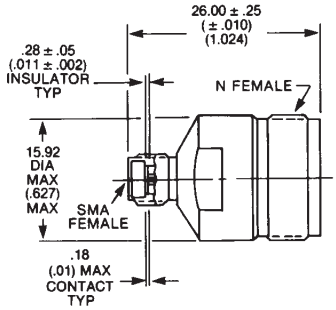
CONSTRUCTION: Gold plated beryllium copper center conductors, injection molded into stainless steel outer bodies.

CONNECTORS: Type N and SMA connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

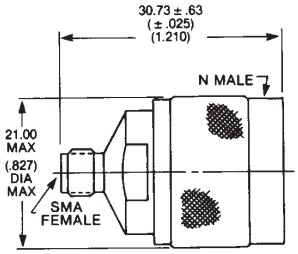
WEIGHT: 30 g (1.1 oz) maximum

PHYSICAL DIMENSIONS:

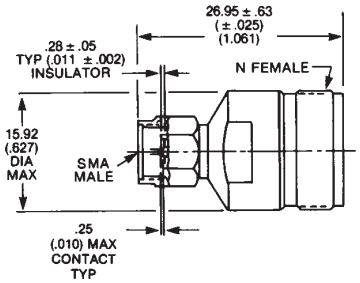
MODEL 7002-13:



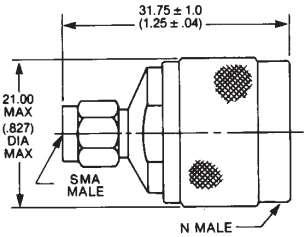
MODEL 7002-14:



MODEL 7002-23:



MODEL 7002-24:



NOTE:

1. All dimensions are given in mm (inches) and are maximum, unless otherwise specified.
2. Unit available with RoHS compliant materials, specify when ordering.

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Revision Date: 3/10/09

Model 1548
Precision Coaxial Adapter

dc to 18.0 GHz

☑ RoHS

SMA to Type N Connectors

Features

- **High Repeatability**
- **Rugged Construction**
- **Stainless Steel Construction**

Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: dc to 18.0 GHz

MAXIMUM SWR:

Frequency (GHz)	SWR*
dc - 18	1.10

INSERTION LOSS (dB):

Frequency (GHz)	Loss (maximum)*
dc - 18	<0.43

REPEATABILITY (dB):

Frequency (GHz)	Type N	SMA
dc - 12.4	< 0.006	0.01
12.4 - 18	< 0.010	0.02

* Specification based on mated pair terminated in 50 Ω.

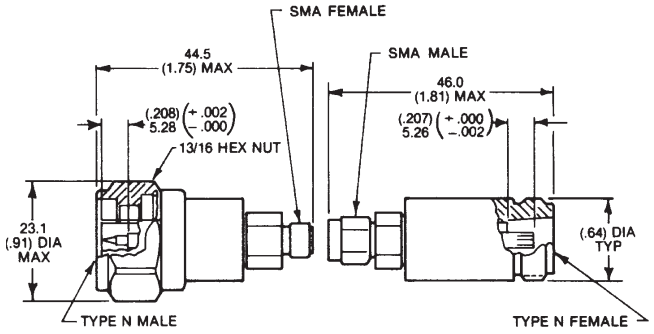
TEMPERATURE RANGE: -55°C to + 85°C

CONSTRUCTION: Stainless steel body and coupling nuts. Gold plated beryllium copper center conductors and SMA bodies, injection molded insulators. Coupling Torque: 14 ± 1 inch pounds for Type N and 8±0.5 inch pounds for SMA.

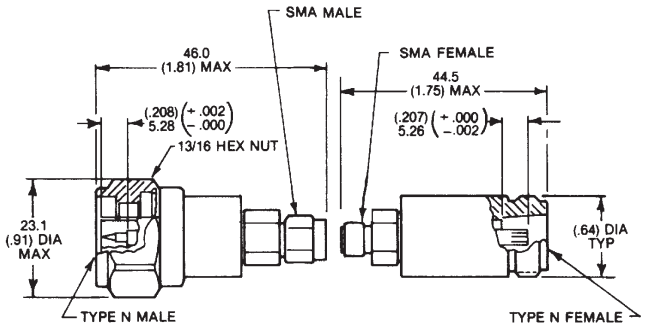
CONNECTORS: Type N and SMA connectors per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connectors.

WEIGHT: 56.7 g (2 oz) maximum connectors only.

PHYSICAL DIMENSIONS:



MODEL 1548-14 **MODEL 1548-23**



MODEL 1548-24 **MODEL 1548-13**

NOTE:

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