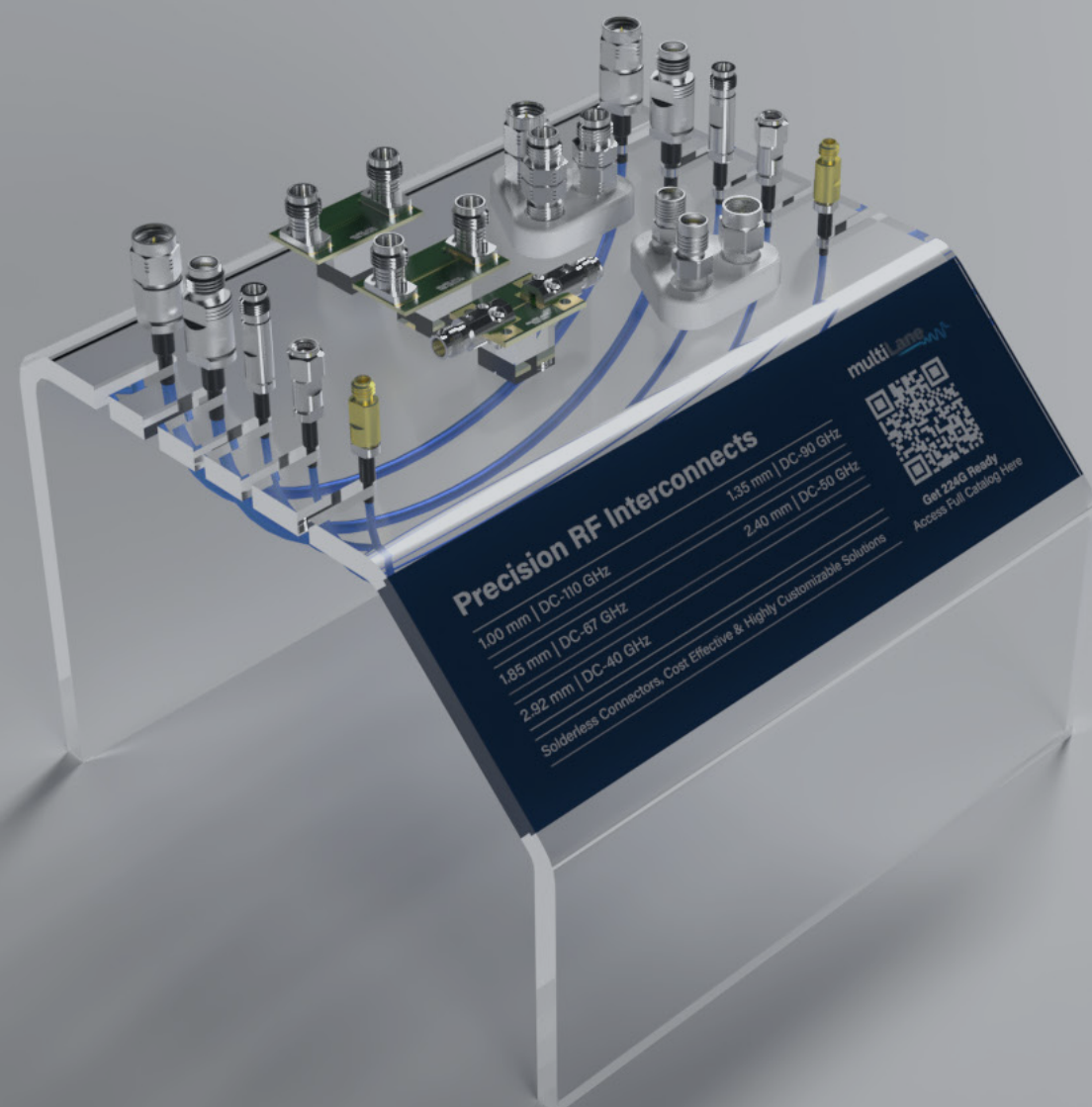




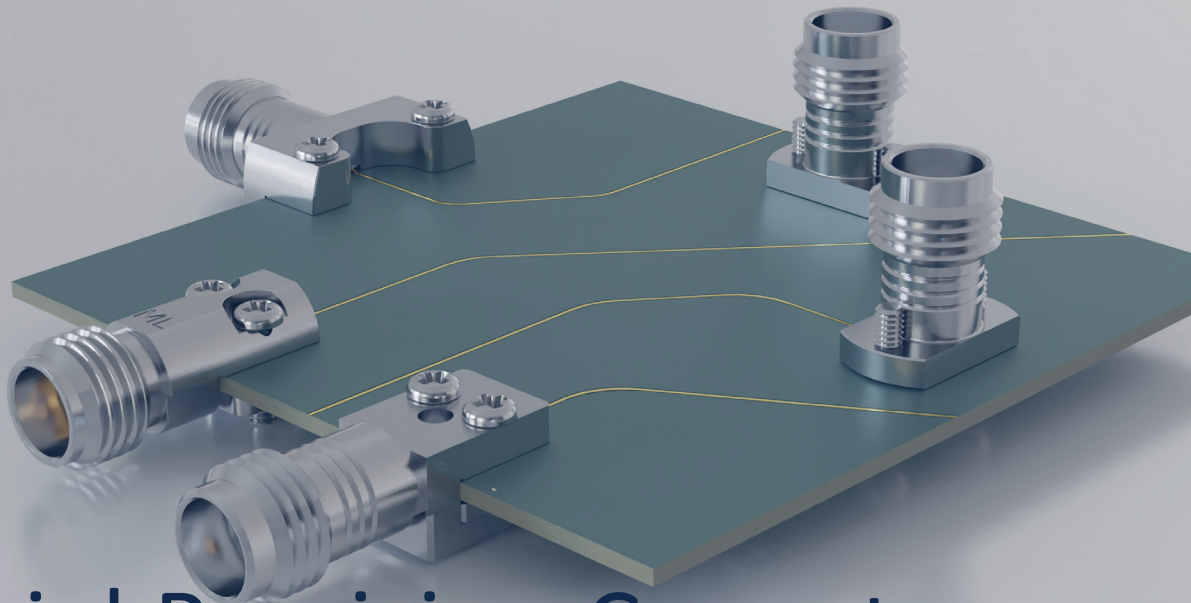
PRECISION RF INTERCONNECTS



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RF Coaxial Precision Connectors

Solderless Board Mount High Performance Precision Connectors | DC-110 GHz

Test & Measurement

| Telecommunications

| High Speed Digital

We recognize the industry's biggest challenge: consolidating a PCB stack up with the appropriate connector. We developed our own solderless precision connectors to support our instrumentation and our partners with the aim to save time and cost when it comes to connector selection all the way to footprint optimization.

Features & Benefits

Solderless precision connectors

Excellent for design and maintenance flexibility
Accelerated installation time reducing production time and costs

Precision and durability in every detail

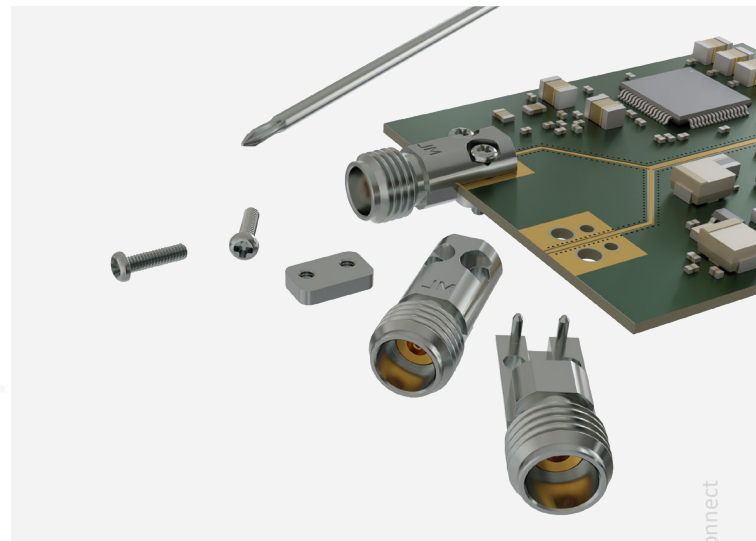
Premium materials in a deliberate design
Rated to 500 mating cycles typical for a long service life
Guiding pins added for increased assembly precision and speed

Excellent for high frequency applications

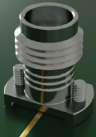
Consistent impedance profile with low insertion & return loss

Footprints can be optimized to application specific PCB stack ups

Test boards available for purchase



Standard offering includes the following configurations:

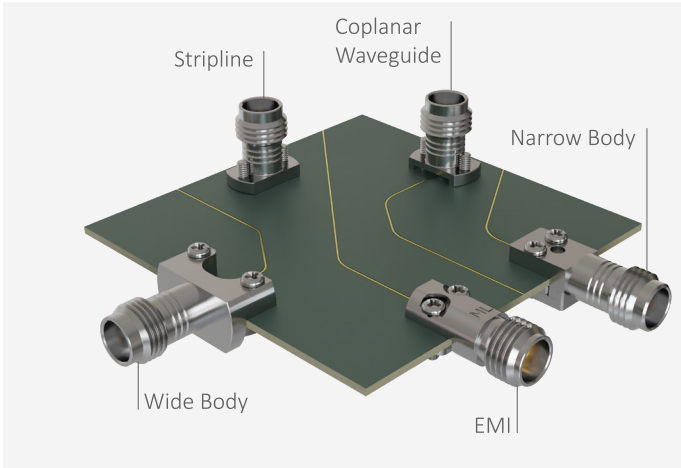
Vertical Launch		Edge Launch		
CPW	STL	EMI	Narrow Body	Wide Body
				
Exclusively CPW trace compatible	Exclusively Stripline trace compatible	Compatible with both Stripline and Coplanar Waveguide traces		

All the above configurations are available with the following interfaces:

Straight Jack (f) configuration solderless 50 Ω precision connectors interfaces				
1.00 mm	1.35 mm	1.85 mm	2.40 mm	2.92 mm
DC – 110 GHz	DC – 90GHz	DC – 67 GHz	DC – 50 GHz	DC – 40GHz

Robust design for maximum performance and productivity

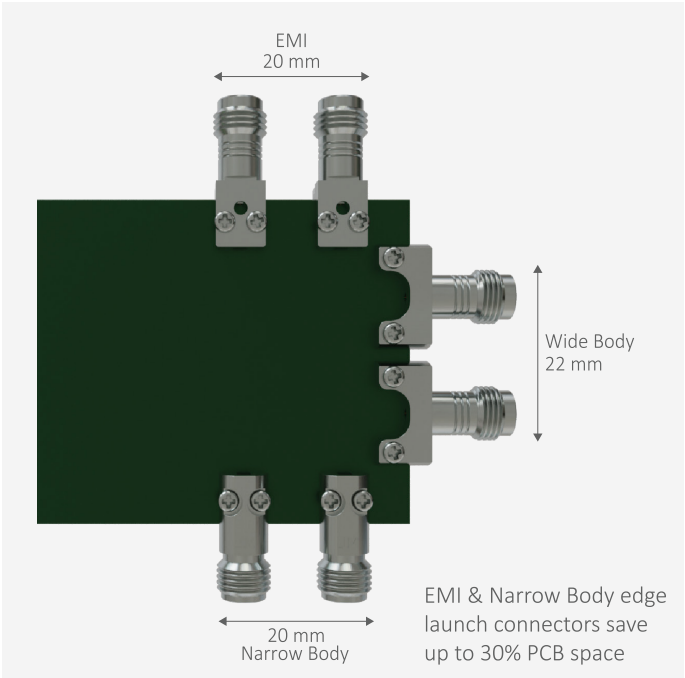
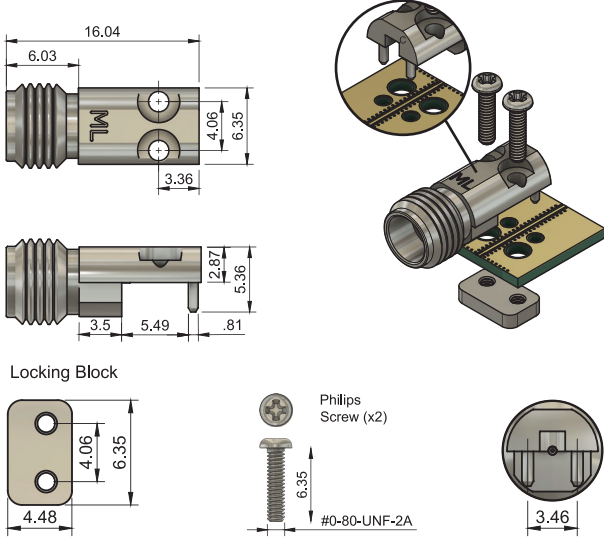
Mechanical & Environmental Specifications	
Temperature Range	+25 °C or +150 °C
Materials	Passivated stainless steel body Gold-plated Beryllium Copper contact
Male-Female Mating Cycles	500 mating cycles typical
Installation Cycles	100 mating cycles typical



EMI Edge Launch Connector

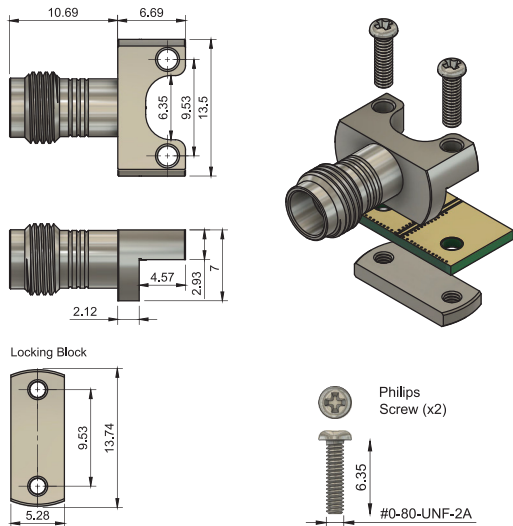
3 Piece Installation

Guiding pins increase assembly precision and speed



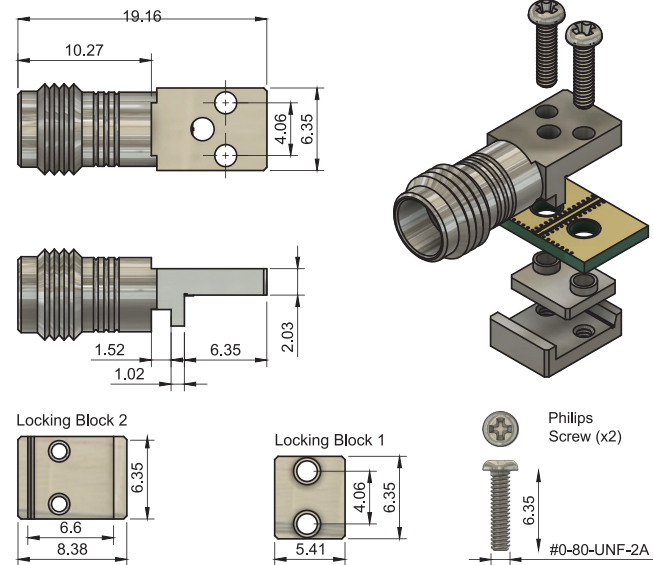
Wide Body Edge Launch Connector

3 Piece Installation



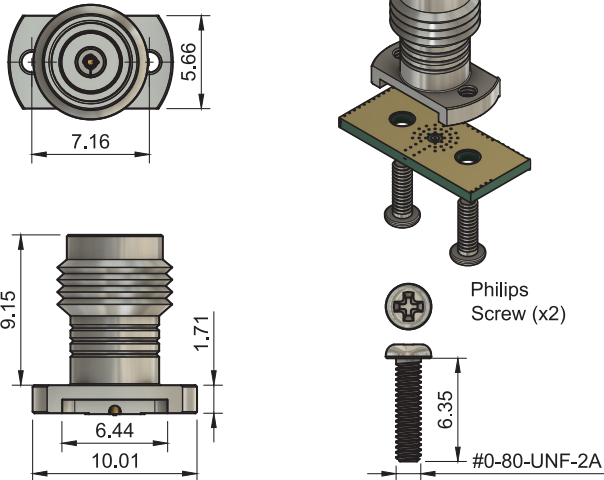
Narrow Body Edge Launch Connector

4 Piece Installation



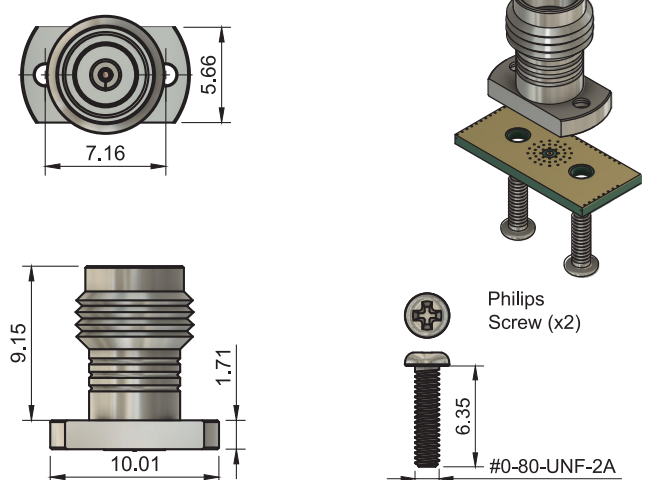
CPW Vertical Launch Connector

2 Piece Installation



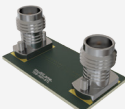
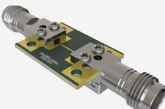
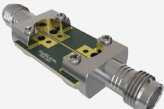
STL Vertical Launch Connector

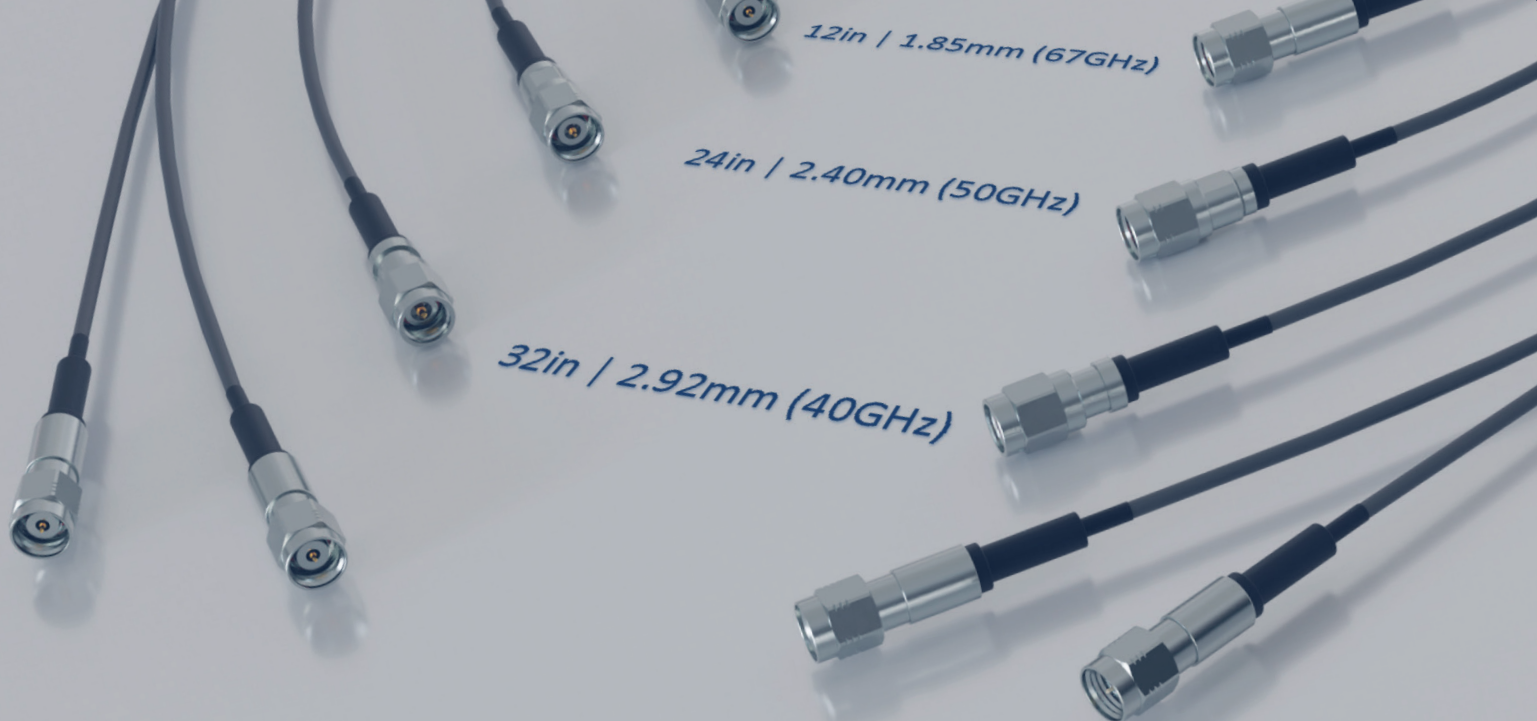
2 Piece Installation



Signal Integrity Prioritized

SI Performance Standalone Connector		Vertical Launch		Edge Launch		
		CPW	STL	EMI	Narrow Body	Wide Body
						
1.00 mm at 110 GHz	VSWR	1.50 max	1.50 max	1.50 max	1.50 max	1.50 max
	Insertion Loss	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB
1.35 mm at 90 GHz	VSWR	1.30 max	1.30 max	1.50 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.57 dB	≤ 0.57 dB	≤ 1.14dB	≤ 0.57 dB	≤ 0.57 dB
1.85 mm at 67 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.48 dB	≤ 0.48 dB	≤ 0.49 dB	≤ 0.49 dB	≤ 0.48 dB
2.40 mm at 50 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB
2.92 mm at 40 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB

SI Performance Connectors on board		Vertical Launch		Edge Launch		
		CPW	STL	EMI	Narrow Body	Wide Body
						
1.00 mm at 110 GHz	VSWR	1.50 max	1.50 max	1.50 max	1.50 max	1.50 max
	Insertion Loss	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB	≤ 1.26 dB
1.35 mm at 90 GHz	VSWR	1.30 max	1.30 max	1.50 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.57 dB	≤ 0.57 dB	≤ 1.14dB	≤ 0.57 dB	≤ 0.57 dB
1.85 mm at 67 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.48 dB	≤ 0.48 dB	≤ 0.49 dB	≤ 0.49 dB	≤ 0.48 dB
2.40 mm at 50 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB	≤ 0.42 dB
2.92 mm at 40 GHz	VSWR	1.30 max	1.30 max	1.30 max	1.30 max	1.30 max
	Insertion Loss	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB	≤ 0.38 dB



RF Coaxial Jumper Cables

Flexible Ø.086 coax cables with precision RF coaxial connectors | DC-67 GHz

Test & Measurement

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Telecommunications

|

High Speed Digital

Signal Integrity Prioritized

We offer phase stable RF Jumpers enabling optimal system performance in applications where precise signal timing is critical.

General Electrical Specifications

Impedance	50 Ω
Cable Frequency Range	DC-110GHz
Capacitance	24.6PF/FT typical
Shielding Effectiveness	>100 dB
Velocity Of Propagation	82%

1.85mm (M) to 1.85mm (M) RF Jumper (65Ghz)

Cable Length	Return Loss	Insertion Loss	TDR Typical
12 in	<-17 dB	-2.1 dB	1205 ps
24 in	<-17 dB	-3.8 dB	2450 ps
32 in	<-17 dB	-5.6 dB	3266 ps
39 in	<-17 dB	-6.8 dB	3980 ps

2.40mm (M) to 2.40mm (M) RF Jumper (50Ghz)

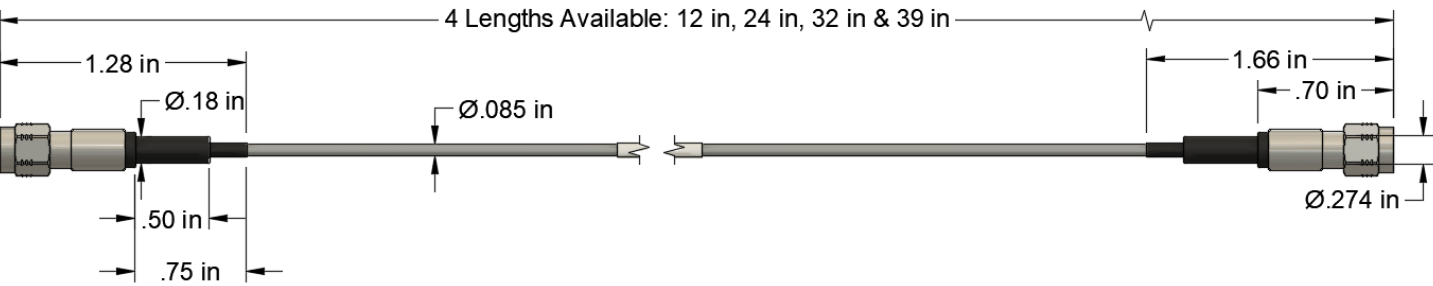
Cable Length	Return Loss	Insertion Loss	TDR Typical
12 in	<-17 dB	1.69 dB	1205 ps
24 in	<-17 dB	3.38 dB	2450 ps
32 in	<-17 dB	4.48 dB	3266 ps
39 in	<-17 dB	5.48 dB	3916 ps

2.92mm (M) to 2.92mm (M) RF Jumper (40Ghz)

Cable Length	Return Loss	Insertion Loss	TDR Typical
12 in	<-17 dB	-1.5 dB	1205 ps
24 in	<-17 dB	-3.0 dB	2450 ps
32 in	<-17 dB	-4.0 dB	3266 ps
39 in	<-17 dB	-4.8 dB	3981 ps

Robust design for maximum performance

Mechanical & Environmental Specifications			
Cable Type		Flexible Ø.086 coax cable	
Cable Weight		0.40 ft	
Oprating Temperature Range		-45 to 125°c	
Maximum Bending Radius	Static	0.13 in	3.5mm
	Dynamic	0.49 in	12.5mm
Flex cycles over 1 in diameter mandrel, 0.5 lb Weight		>2000	
Pull Strength: cable to connector		10lbs minimum	



- Stainless steel coaxial connectors for maximum reusability
Able to withstand 500 mating cycles enabling reliability & repeatability
- High performance flexible Ø.086 coax cable
- Phase stable RF jumpers and cable pairs time delay matched to +/- 0.5
Tighter phase matching available upon request



Precision RF Coaxial Adapters

Within Series and Between Series Precision Grade Connector Savers | DC-67 GHz

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Features & Benefits

High repeatability and accuracy

Premium materials in a deliberate design rated to 1000 cycles for a long service life and high mating reliability

Excellent for high frequency applications

Consistent impedance profile with low insertion & return loss

Wide variety of mating interfaces

50 Ω precision grade coaxial adapters with a frequency range up to 65 GHz, available in within-series and between-series configurations:

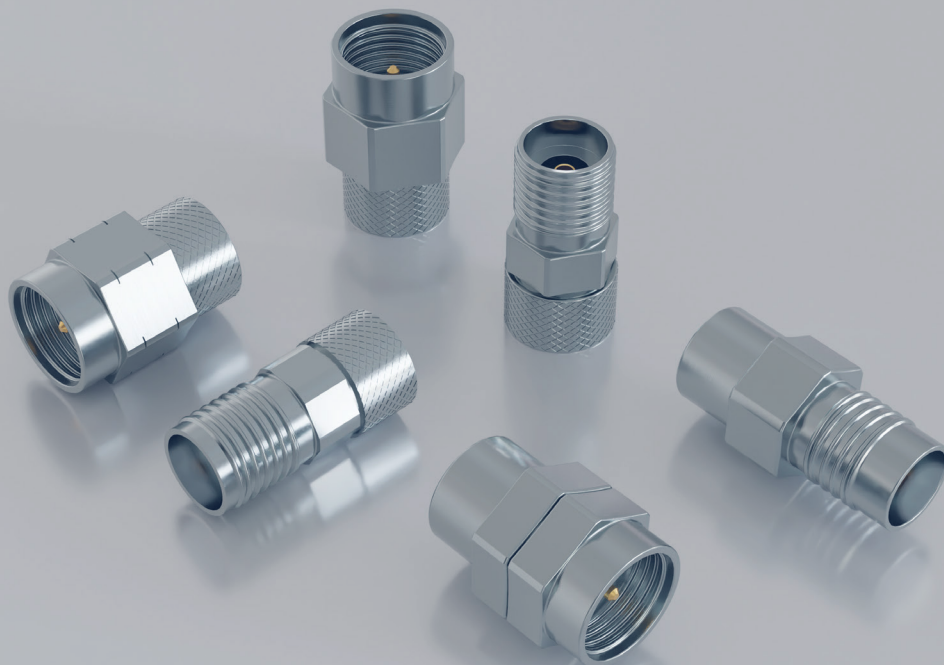
	Between Series			
	Plug to Plug	Jack to plug		Jack to Jack
50GHz	2.40 mm	2.40 mm	2.40 mm	2.40 mm
40GHz	1.85mm	1.85mm	1.85mm	1.85mm
40GHz	2.92 mm	2.92 mm	2.92 mm	2.92 mm
40GHz	1.85mm	1.85mm	1.85mm	1.85mm
40GHz	2.40mm	2.40mm	2.40mm	2.40mm

	Within Series		
	Plug to Plug	Jack to Plug	Jack to Jack
1.85 mm 67 GHz			
2.40 mm 50 GHz			
2.92 mm 40 GHz			

50 Ω RF Coaxial Adapters – Within Series – Straight Configuration				
Configuration	Interface	Part Number	V.S.W.R Max	Insertion Loss
Plug to Plug	1.85mm	MLA-185MST-185MST	1.15 max. at 65 GHz	0.48 db max. at 65 Ghz
	2.40mm	MLA-240MST-240MST	1.15 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm	MLA-292MST-292MST	1.15 max. at 40 GHz	0.38 db max. at 40 GHz
Plug to Jack	1.85mm	MLA-185MST-185FST	1.20 max. at 65 GHz	0.48 db max. at 65 Ghz
	2.40mm	MLA-240MST-240FST	1.20 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm	MLA-292MST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
Jack to Jack	1.85mm	MLA-185FST-185FST	1.20 max. at 65 GHz	0.48 db max. at 65 Ghz
	2.40mm	MLA-240FST-240FST	1.20 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm	MLA-292FST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz

50 Ω RF Coaxial Adapters – In-Between Series – Straight Configuration				
Configuration	Interface	Part Number	V.S.W.R Max	Insertion Loss
1.85mm Jack to	2.40mm Plug	MLA-185FST-240MST	1.20max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm Plug	MLA-185FST-292MST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
	2.40mm Jack	MLA-185FST-240FST	1.20 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm Jack	MLA-185FST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
1.85mm Plug to	2.40mm Plug	MLA-185MST-240MST	1.15 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm Plug	MLA-185MST-292MST	1.15 max. at 40 GHz	0.38 db max. at 40 GHz
	2.40mm Jack	MLA-185MST-240FST	1.20 max. at 50 GHz	0.42 db max. at 50 GHz
	2.92 mm Jack	MLA-185MST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
2.40 mm Jack to	2.92 mm Plug	MLA-240FST-292MST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
	2.92 mm Jack	MLA-240FST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz
2.40 mm Plug to	2.92 mm Plug	MLA-240MST-292MST	1.15 max. at 40 GHz	0.38 db max. at 40 GHz
	2.92 mm Jack	MLA-240MST-292FST	1.20 max. at 40 GHz	0.38 db max. at 40 GHz

Mechanical & Environmental Specifications		
Materials	Body	Passivated stainless steel
	Contact	Gold-plated BeCu contact
Male-Female Mating Cycles		> 500 mating cycles typical
Operating Temperature Range	Within Series	-65°C to +165°C
	Between Series	-55°C to +85°C



Precision RF Coaxial Terminators

Precision Grade Coaxial Terminations for Optimal System Performance | DC-67 GHz

Test & Measurement

Telecommunications

High Speed Digital

Features & Benefits

IEEE high-frequency color convention adopted

Prevents damage due to improper mating of incompatible terminators

High repeatability and accuracy

Premium materials in a deliberate design rated to 500 mating cycles typical for a long service life and high mating reliability

Excellent for high frequency applications

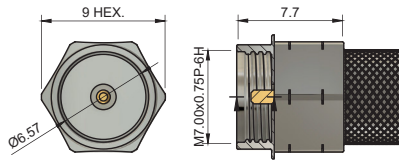
Consistent impedance profile with low insertion & return loss

50 Ω precision grade coaxial RF terminators

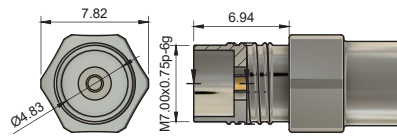
Spanning a frequency range up to 67 GHz, our offering includes the following configurations:

	Male	Female	Male- 50 Ω RF Coaxial Terminators - Straight Configuration				
1.85 mm DC – 67 GHz			Size	Frequency	Part Number	VSWR Max	Power Handling
			1.85 mm	DC - 67 GHz	MLT-185MST-2	1.50 max @ 67 GHz	2 Watt @ 25°C
			2.4 mm	DC - 50 GHz	MLT-240MST-1	1.30 max @ 50 GHz	1 Watt @ 25°C
			2.92 mm	DC - 40 GHz	MLT-292MST-2	1.20 max @ 40 GHz	2 Watt @ 25°C
2.40 mm DC – 50 GHz			Female - 50 Ω RF Coaxial Terminators - Straight Configuration				
			Size	Frequency	Part Number	VSWR Max	Power Handling
			1.85 mm	DC - 67 GHz	MLT-185FST-2	1.30 max @ 67 GHz	2 Watt @ 25°C
2.92 mm DC – 40 GHz			2.4 mm	DC - 50 GHz	MLT-240FST-1	1.30 max @ 50 GHz	1 Watt @ 25°C
			2.92 mm	DC - 40 GHz	MLT-292FST-2	1.20 max @ 40 GHz	2 Watt @ 25°C

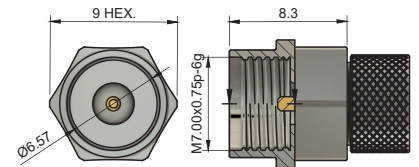
1.85 mm Male



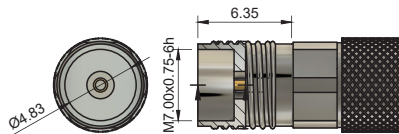
2.40 mm Male



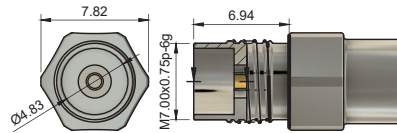
2.92 mm Male



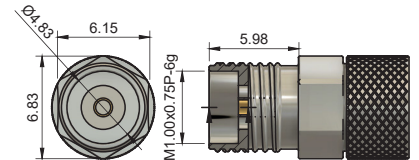
1.85 mm Female



2.40 mm Female



2.92 mm Female



Mechanical Specifications

Materials	Passivated stainless steel body with a gold-plated Beryllium Copper contact
Male-Female Mating Cycles	500 mating cycles typical
Operating Temperature Range	-55°C to +120°C



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