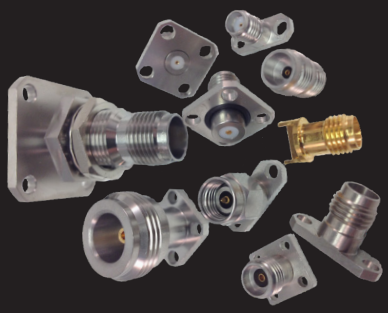
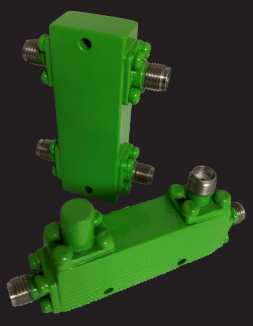
RESPONSE MICROWAVE, INC

PRECISION TEST ACCESSORIES PRODUCT GUIDE

CONNECTIVITY & COMPONENT SOLUTIONS FOR RF/MICROWAVE/MILLIMETERWAVE/LIGHT

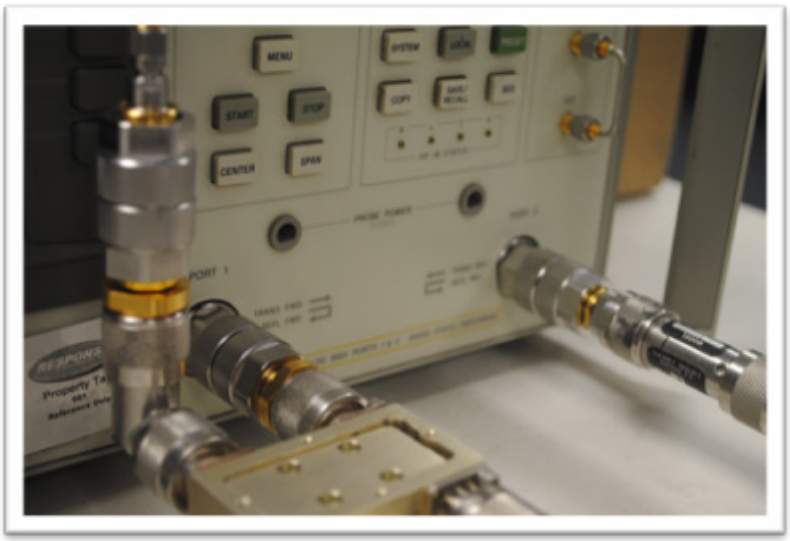




THE RMI SOLUTION

With over 20 years of heritage, we have built a strong and diverse product offering which addresses the specific needs of a given market be it telecom, military, medical, industrial or scientific. As a result, we offer various grades of products tailored to meet your individual project needs. This handout presents a small overview of our precision test accessories segment so if you do not see your exact needs, please inquire. Our full line product catalog and online selection guide offer additional details while our offering evolves daily.

With an extensive library of connectivity and component designs operating DC to light, we are certain to address your design needs. We invite you to submit your requirements either directly or through our global team of representatives and experience a new wave of connectivity and control component solutions suited for your application.



- Adaptors
- Cable Assemblies
- Connectors
- Terminations
- Attenuators
- DC Blocks
- Bias Tees
- Couplers & Hybrids
- Filters & Diplexers
- Power Dividers
- Phase Shifters
- Isolators & Circulators
- Tools
- Cal Kits

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RESPONSE MICROWAVE, INC

RoHS COMPLIANT PRODUCTS

PRECISION ADAPTORS

IN-SERIES FAMILY

Part Number	Connector 1	Connector 2	Frequency	VSWR
RMAD.IS.N18ff	N18 female	N18 female	DC-18GHz	1.20:1 max
RMAD.IS.N18mf	N18 male	N18 female	DC-18GHz	1.20:1 max
RMAD.IS.N18mm	N18 male	N18 male	DC-18GHz	1.20:1 max
RMAD.IS.TNC18ff	TNC18 female	TNC18 female	DC-18GHz	1.20:1 max
RMAD.IS.TNC18mf	TNC18 male	TNC18 female	DC-18GHz	1.20:1 max
RMAD.IS.TNC18mm	TNC18 male	TNC18 male	DC-18GHz	1.20:1 max
RMAD.IS.SMA27ff	SMA27 female	SMA female	DC-26.5GHz	1.15:1 max
RMAD.IS.SMA27mf	SMA27 male	SMA female	DC-26.5GHz	1.15:1 max
RMAD.IS.SMA27mm	SMA27 male	SMA male	DC-26.5GHz	1.15:1 max
RMAD.IS.35ff	3.5mm female	3.5mm female	DC-33GHz	1.15:1 max
RMAD.IS.35mf	3.5mm male	3.5mm female	DC-33GHz	1.15:1 max
RMAD.IS.35mm	3.5mm male	3.5mm male	DC-33GHz	1.15:1 max
RMAD.IS.292ff	2.92mm female	2.92mm female	DC-40GHz	1.20:1 max
RMAD.IS.292mf	2.92mm male	2.92mm female	DC-40GHz	1.20:1 max
RMAD.IS.292mm	2.92mm male	2.92mm male	DC-40GHz	1.20:1 max
RMAD.IS.24ff	2.4mm female	2.4mm female	DC-50GHz	1.20:1 max
RMAD.IS.24mf	2.4mm male	2.4mm female	DC-50GHz	1.20:1 max
RMAD.IS.24mm	2.4mm male	2.4mm male	DC-50GHz	1.20:1 max
RMAD.IS.185ff	1.85mm female	1.85mm female	DC-65GHz	1.30:1 max
RMAD.IS.185mf	1.85mm male	1.85mm female	DC-65GHz	1.30:1 max
RMAD.IS.185mm	1.85mm male	1.85mm male	DC-65GHz	1.30:1 max
RMAD.IS.10ff	1.0mm female	1.0mm female	DC-110GHz	1.35:1 max
RMAD.IS.10mf	1.0mm male	1.0mm female	DC-110GHz	1.35:1 max
RMAD.IS.10mm	1.0mm male	1.0mm male	DC-110GHz	1.35:1 max

BETWEEN-SERIES FAMILY

All gender and series combinations available between:

SMA27
N18
TNC18
3.5mm
2.92mm
2.4mm
1.35mm
1.85mm
1.0mm

Contact us for individual data sheets.

NMD SERIES FAMILY

Part Number	Connector 1	Connector 2	Frequency	VSWR
RMAD.IS.NMD35fm	NMD3.5mm female	NMD3.5mm male	DC-26.5GHz	1.15:1 max
RMAD.IS.NMD35ff	NMD3.5mm female	NMD3.5mm female	DC-26.5GHz	1.15:1 max
RMAD.BS.NMD35Nfm	NMD3.5mm female	N18 male	DC-18GHz	1.15:1 max
RMAD.BS.NMD35Nff	NMD3.5mm female	N18 female	DC-18GHz	1.15:1 max
RMAD.BS.NMD29NMD35fm	NMD2.92mm female	NMD3.5mm male	DC-26.5GHz	1.15:1 max
RMAD.BS.NMD2935ff	NMD2.92mm female	3.5mm female	DC-26.5GHz	1.15:1 max
RMAD.IS.NMD24fm	NMD2.4mm female	NMD2.4mm male	DC-50GHz	1.25:1 max
RMAD.BS.NMD2424ff	NMD2.4mm female	2.4mm female	DC-50GHz	1.25:1 max
RMAD.BS.NMD24NMD29fm	NMD2.4mm female	NMD2.92mm male	DC-40GHz	1.20:1 max
RMAD.BS.NMD2429ff	NMD2.4mm female	2.92mm female	DC-40GHz	1.20:1 max
RMAD.BS.NMD24NMD35fm	NMD2.4mm female	NMD3.5mm male	DC-26.5GHz	1.15:1 max
RMAD.BS.NMD2435ff	NMD2.4mm female	3.5mm female	DC-26.5GHz	1.15:1 max
RMAD.IS.NMD185fm	NMD1.85mm female	NMD1.85mm female	DC-67GHz	1.35:1 max
RMAD.BS.NMD185185ff	NMD1.85mm female	1.85mm female	DC-67GHz	1.35:1 max
RMAD.BS.NMD185NMD24fm	NMD1.85mm female	NMD2.4mm male	DC-50GHz	1.25:1 max
RMAD.BS.NMD18524ff	NMD1.85mm female	2.4mm female	DC-50GHz	1.25:1 max

7mm SERIES FAMILY

Part Number	Connector 1	Connector 2	Frequency	VSWR
RMAD.BS.735ff	7mm female	3.5mm female	DC-18GHz	1.10:1 max
RMAD.BS.735fm	7mm female	3.5mm male	DC-18GHz	1.10:1 max
RMAD.BS.729ff	7mm female	2.92mm female	DC-18GHz	1.10:1 max
RMAD.BS.729fm	7mm female	2.92mm male	DC-18GHz	1.10:1 max
RMAD.BS.7N18ff	7mm female	N18 female	DC-18GHz	1.10:1 max
RMAD.BS.7N18fm	7mm female	N18 male	DC-18GHz	1.10:1 max

PRECISION COMPONENTS

TERMINATIONS

Part Number	Connector	Frequency	VSWR	Power
RMTE.18000.Nm	N18 male	DC-18GHz	1.20:1 max	2W
RMTE.18000.TNCm	TNC18 male	DC-18GHz	1.20:1 max	2W
RMTE.27000.SMAm	SMA27 male	DC-26.5GHz	1.20:1 max	0.5W & 2W
RMTE.27000.35m	3.5mm male	DC-26.5GHz	1.15:1 max	0.5W & 2W
RMTE.40000.292m	2.92mm male	DC-40GHz	1.25:1 max	0.5W & 1W
RMTE.50000.24m	2.4mm male	DC-50GHz	1.30:1 max	0.5W & 1W
RMTE.65000.185m	1.85mm male	DC-65GHz	1.45:1 max	0.5W & 1W

DC BLOCKS

Part Number	Connector	Frequency	VSWR	Loss
RMDC.18000.Nmf	N18 male/female	DC-18GHz	1.25:1 max	0.6dB max
RMDC.18000.TNCmf	TNC18 male/female	DC-18GHz	1.25:1 max	0.6dB max
RMDC.18000SMAmf	SMA male/female	DC-18GHz	1.25:1 max	0.8dB max
RMDC.27000.SMA27mf	SMA27 male/female	DC-26.5GHz	1.25:1 max	0.8dB max
RMDC.26500.35mf	3.5mm male/female	DC-26.5GHz	1.25:1 max	0.8dB max
RMDC.40000.292mf	2.92mm male/female	DC-40GHz	1.30:1 max	0.8dB max
RMDC.50000.24mf	2.4mm male/female	DC-50GHz	1.25:1 max	0.6dB max

ATTENUATORS

Part Number	Connector	Attenuation	Frequency	Power
RMATxx.18000.Nmf	N18 male/female	xx = 1 – 40dB	DC-18GHz	5W
RMATxx.18000SMAmf	SMA male/female	xx = 1 – 40dB	DC-18GHz	2W
RMATxx.26500.35mf	3.5mm male/female	xx = 1 – 40dB	DC-26.5GHz	2W
RMATxx.40000.292mf	2.92mm male/female	xx = 1 – 40dB	DC-40GHz	2W
RMATxx.50000.24mf	2.4mm male/female	xx = 1 – 40dB	DC-50GHz	2W
RMATxx.65000.185mf	185mm male/female	xx = 1 – 40dB	DC-65GHz	2W

DIRECTIONAL COUPLERS

Part Number	Connector	Coupling	Frequency	Loss
RMCOxx.05-18000Sf	SMA female	xx = 6 – 40dB	0.5-18GHz	1.5dB max
RMCOxx.1-26.5Sf	SMA female	xx = 6 – 40dB	1–26.5GHz	1.8dB max
RMCOxx.1-40.292f	2.92mm female	xx = 6 – 40dB	1-40GHz	2.0dB max
RMCOxx.1-50.24f	2.4mm female	xx = 6 – 40dB	1-50GHz	3.5dB max
RMCOxx.1-67f	1.85mm female	xx = 6 – 40dB	1-67GHz	2.8dB max

QUADRATURE HYBRIDS

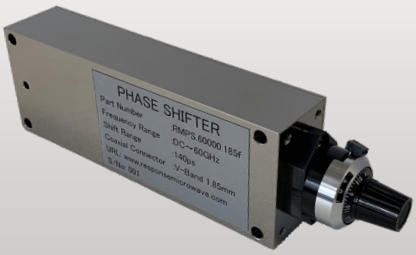
Part Number	Connector	Coupling	Frequency	Loss
RMHY3.1-18Sf	SMA female	3dB	1-18GHz	2.5dB max
RMHY3.18000Sf	SMA female	3dB	2-18GHz	1.8dB max
RMHY3.2-20Sf	SMA female	3dB	2-20GHz	1.9dB max

POWER DIVIDERS

Part Number	Connector	Division	Frequency	Isolation
RMPD2.1-18Sf	SMA female	2-way	1-18GHz	15dB min
RMPD2.2-18Sfa	SMA female	2-way	2–18GHz	18dB min
RMPD2.1-40.292f	2.92mm female	2-way	1-40GHz	18dB min
RMPD2.1-50.24f	2.4mm female	2-way	1-50GHz	18dB min

PHASE SHIFTERS

Part Number	Connector	Phase Variation	Frequency	VSWR
RMPS.18000Sf	SMA female	53°/GHz	DC-18GHz	1.15:1 max
RMPS.20000Sf	SMA female	53°/GHz	DC-20GHz	1.15:1 max
RMPS.40000.29f	2.92m female	50°/GHz	DC-40GHz	1.15:1 max
RMPS.60000.185f	1.85m female	50°/GHz	DC-60GHz	1.40:1 max



CABLE ASSEMBLIES

We supply a vast array of precision test cables operating from DC-110GHz based on varied industry demands for phase stability, phase matching, insertion loss, flexure, crush resistance, power handling and shielding. Please contact us with your specific requirements and we will prepare a formal quotation and data package to accommodate your needs.

TESTCABLZ™

PRECISION CABLE ASSEMBLIES

The following table provides a broad overview of available series to serve your applications. We have options that are tailored for specific parameters such as low loss, phase stability, high flexure, phase matching, crush resistance, high power and low VSWR so please allow us the opportunity to address your specific needs by contacting us with your unique specifications. We will reply with a formal quotation and data sheet.

SERIES	FREQUENCY COVERAGE	AVAILABLE CONNECTORS
TCBLZ2	DC-18GHz	SMA, N, BNC, TNC
TCBLZ5	DC-18GHz	SMA, N, BNC, TNC
TCBLZG9	DC-20GHz	SMA
TCBLZJ9	DC-26.5GHz	SMA, 3.5mm
TCBLZ29	DC-33GHz	3.5mm, 2.92mm
TCBLZA88	DC-40GHz	2.92mm
TCBLZJ7	DC-40GHz	2.92mm
TCBLZG7	DC-40GHz	2.92mm
TCBLZC2	DC-40GHz	2.92mm
TCBLZG0	DC-50GHz	2.4mm
TCBLZJ6	DC-60GHz	2.92mm, 1.85mm
TCBLZ61	DC-67GHz	2.92mm, 1.85mm
TCBLZ70	DC-110GHz	1.0mm

vCABLZ ™

VNA CABLE ASSEMBLIES

VNA Test Port	Connector 1	Connector 2	Part Number	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
Type N female	Type N male	Type N male	RMCA24.vCBLZNmm	18GHz	1.20:1 max	<1.5dB	<±0.05dB	<±2.0°
		Type N female	RMCA24.vCBLZNmf					
		NMD3.5mm male	RMCA24.vCBLZNd35mm					
		3.5mm female	RMCA24vCBLZN35mf					
NMD3.5mm male	NMD3.5mm female	NMD3.5mm male	RMCA24.vCBLZd35fm	26.5GHz	1.25:1 max	<1.8dB		<±2.5°
		3.5mm female	RMCA24.vCBLZd3535ff					
		Type N male	RMCA24.vCBLZd35Nfm	18GHz	1.20:1 max	<1.5dB		<±2.0°
		Type N female	RMCA24.vCBLZd35Nff					
NMD2.92mm male	NMD2.92mm female	NMD2.92mm male	RMCA24.vCBLZd29fm	40GHz	1.30:1 max	<2.8dB		<±3.0°
		2.92mm female	RMCA24.vCBLZd2929ff					
		NMD2.4mm male	RMCA24.vCBLZd29d24fm					
		2.4mm female	RMCA24.vCBLZd2924ff					
NMD2.4mm male	NMD2.4mm female	NMD2.4mm male	RMCA24.vCBLZd24fm	50GHz	1.35:1 max	<3.2dB		<±3.5°
		2.4mm female	RMCA24.vCBLZd2424ff					
		NMD2.92mm male	RMCA24.vCBLZd24d29fm	40GHz	1.30:1 max	<2.8dB		<±3.0°
		2.92mm female	RMCA24.vCBLZd2429ff					
NMD1.85mm male	NMD1.85mm female	NMD1.85mm male	RMCA24.vCBLZd18fm	67GHz	1.50:1 max	<5.8dB		<±6.5°
		1.85mm female	RMCA24.vCBLZd1818ff					

Mechanical Parameters:

Center Conductor: Silver plated copper
Dielectric: PTFE
Inner Shield: Silver plated copper braid
Outer Shield: Silver plated copper tape
Outer Jacket: Multi-layer armor
Minimum Bend Radius: 50 mm (1.97")

Environmental Parameters:

Operating Temperature: 0 + 40°C
Storage Temperature: -40 + 75°C
Compression Resistance: > 920 kgf/cm

RESPONSE MICROWAVE, INC

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CONNECTIVITY SOLUTIONS

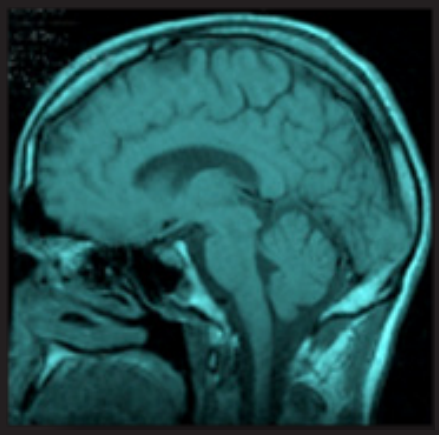
Response Microwave offers a complete line of high quality, cost effective connectivity solutions for use in your commercial or military environment. All product is available in either brass or stainless steel base materials with gold, silver, passivate or ternary alloy plating finish. In most cases, interfaces meet the requirements of MIL-C-39012, CECC-22210 and IEC-169-16.

All product offered is manufactured in an ISO9000-2001 process and is RoHS compliant. We are also able to provide certification for chemical analysis, metalurgy, mechanical and electrical (including PIM) compliance test, structural analysis and non-destructive environmental test as required.

Below is a sampling of current standard product availability. Custom variants are considered upon request. Please forward your specific requirements and we will respond with a price and technical quotation accordingly. Contact us with your requirements on coaxial connectors, adaptors, and cable assemblies within the following product families and feel free to download the complete catalogs from our website.

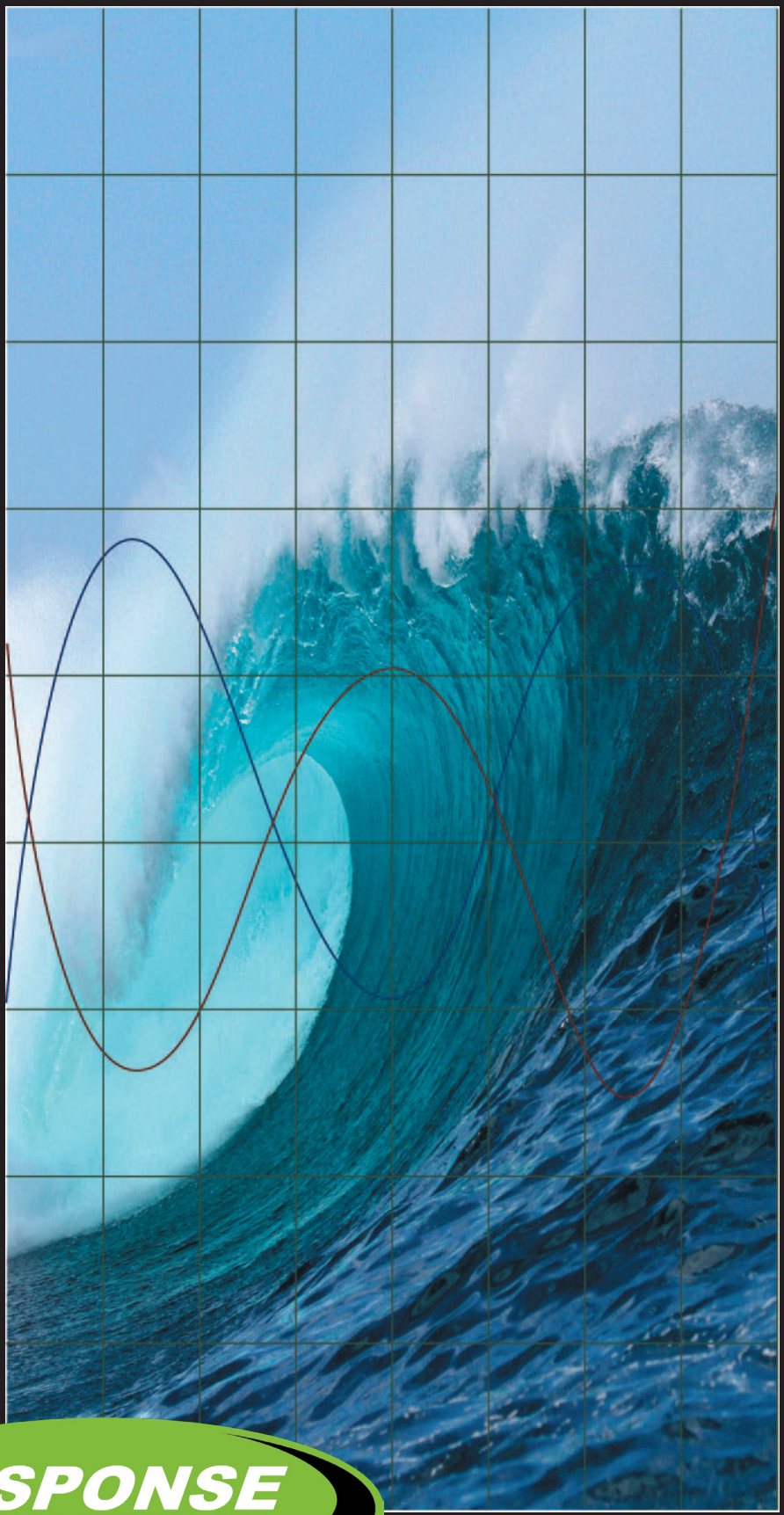
SERIES	FREQUENCY(GHz)	IMPEDANCE(Ω)	COUPLING	HIGHEST POWER	HIGHEST FREQUENCY
1.6/5.6	DC-1	75	Push-on		
F	DC-2	75	Thread-on		
7/8	DC-3	50	Push-on	•	
SMZ (BT43)	DC-3	75	Push-on		
U.FL	DC-3	50	Push-on		
BNC	DC-4	50 & 75	Bayonet		
SMB	DC-4	50	Push-on		
SMC	DC-6	50	Push-on		
BMA	DC-6	50	Push-on		
MCX	DC-6	50 & 75	Push-on		
MMCX	DC-6	50 & 75	Push-on		
7/16	DC-8	50	Thread-on		
4.3/10	DC-8.5	50	Thread-on		
1.0/2.3	DC-10	50 & 75	Push-on		
4.1/9.5	DC-10	50	Thread-on		
N	DC-12.4	50	Thread-on		
SMA	DC-18	50	Thread-on		
SMAP	DC-18	50	Push-on		
N18	DC-18	50	Thread-on		
TNC	DC-18	50	Thread-on		
SMA27	DC-26.5	50	Thread-on		
3.5mm	DC-33	50	Thread-on		
SSMA	DC-35	50	Thread-on		
SMP	DC-40	50	Push-on		
2.92mm	DC-40	50	Thread-on		
2.4mm	DC-50	50	Thread-on		
1.85mm	DC-65	50	Thread-on		
1.0mm	DC-110	50	Thread-on		•

TELECOMMUNICATIONS



MEDICAL

MILITARY



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