mmWave Precision Coaxial Adapters

A precision adapter portfolio engineered for high-frequency RF, microwave, and millimeter-wave signal chains. Tight mechanical tolerances and repeatable air-line geometry deliver low VSWR, low insertion loss, and stable, repeatable measurements across demanding test and field environments — including in-series barrels, gender changers, and between-series K-to-V crossovers.

FREQUENCY RANGE	IMPEDANCE	VSWR	CONFIGURATIONS
DC–67 GHz	**50** Ohms	**≤ 1.15** (typ.)	**10** Part Numbers

TWO INTERFACE FAMILIES

2.92 mm (K)

DC to 40 GHz · MIL-STD-348B Interface

Rugged 40 GHz interface that is mechanically compatible with SMA and 3.5 mm connectors — ideal for general microwave instrumentation and broadband test benches.

- Insertion loss ≤ 0.05 × √F(GHz) dB on in-series barrels
- F-F barrel rated to +125 °C — widest range in the series
- Barrel and gender-changer options for VNA ports, cables, and DUTs
- Intermatable with SMA / 3.5 mm hardware

1.85 mm (V)

DC to 67 GHz · IEEE STP P287 Interface

Full 67 GHz precision interface for network analyzers, mmWave instrumentation, and next-generation high-speed and satellite payload development.

- F-F barrel achieves the tightest IL spec: ≤ 0.01 × √F(GHz) dB
- Up to 1,000 mating cycles — highest durability in the series
- Precision air-line geometry maintained through 67 GHz
- Barrel and gender-changer options

COMMON SPECIFICATIONS AND APPLICATIONS

Impedance	**50 Ω nominal**
VSWR	**≤ 1.15 (typ), at rated frequency**
Body material	**Stainless steel, passivated**
Center contacts	**Gold-plated beryllium copper (BeCu)**
Dielectric	**PEI (natural)**
Interface standards	**V: IEEE STP P287 · K: MIL-STD-348B**
Compliance	**RoHS**

APPLICATIONS

- VNA / network analyzer test ports
- Microwave & mmWave instrumentation
- High-speed communications
- Radar & defense electronics
- Aerospace & satellite payloads Broadband
- RF test & measurement

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ORDERING INFORMATION & SPECIFICATIONS

PART NUMBER	INTERFACE 1	INTERFACE 2	CONFIGURATION	FREQ.	VSWR	INSERTION LOSS (MAX)	MATING CYCLES	TEMP. RANGE
1.85 MM (V) SERIES — DC TO 67 GHZ · IEEE STP P287								
P2RF185F-F-67	1.85 mm Female (V)	1.85 mm Female (V)	Barrel	DC to 67 GHz	≤ 1.15	≤ 0.01 × √F	1,000 min	–40 to +85 °C
P2RF185M-F-67	1.85 mm Male (V)	1.85 mm Female (V)	Gender Changer	DC to 67 GHz	≤ 1.15	≤ 0.10 × √F	500 min	–40 to +85 °C
P2RF185M-M-67	1.85 mm Male (V)	1.85 mm Male (V)	Barrel	DC to 67 GHz	≤ 1.15	≤ 0.10 × √F	500 min	–40 to +85 °C
2.92 MM (K) SERIES — DC TO 40 GHZ · MIL-STD-348B								
P2RF29F-F-40	2.92 mm Female (K)	2.92 mm Female (K)	Barrel	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	100 min	–40 to +125 °C
P2RF29M-M-40	2.92 mm Male (K)	2.92 mm Male (K)	Barrel	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	100 min	–40 to +85 °C
P2RF29M-F-40	2.92 mm Male (K)	2.92 mm Female (K)	Gender Changer	DC to 40 GHz	≤ 1.15	≤ 0.12 × √F	100 min	–40 to +85 °C
BETWEEN-SERIES (K ↔ V) — DC TO 40 GHZ · IEEE STP P287 / MIL-STD-348B								
P2RF29F-185F-40	2.92 mm Female (K)	1.85 mm Female (V)	K → V	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	500 min	–40 to +125 °C
P2RF29M-185M-40	2.92 mm Male (K)	1.85 mm Male (V)	K → V	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	500 min	–40 to +85 °C
P2RF29M-185F-40	2.92 mm Male (K)	1.85 mm Female (V)	K → V	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	500 min	–40 to +85 °C
P2RF29F-185M-40	2.92 mm Female (K)	1.85 mm Male (V)	K → V	DC to 40 GHz	≤ 1.15	≤ 0.05 × √F	500 min	–40 to +85 °C

PART NUMBER KEY

P2RF **29** **M** - **185F** - **40** → Precision adapter · **29** = 2.92 mm (K) first interface · **M** = male · **185F** = 1.85 mm (V) female second interface · **40** = DC–40 GHz rating. (A single interface code, e.g., 185F-F-67, denotes a same-family adapter.)

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