



All dimensions are in mm; tolerances according to ISO 2768 m-H

Interface

RPC-3.50 according to IEC 60169-23
RPC-3.50 mechanically compatible with RPC-2.92 and SMA
P-SMP according to Rosenberger P-SMP standard

Documents

Application note	AN001 "Calibration Services"
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Material and plating

Connector parts

Center conductor	Material	Plating
Outer conductor RPC-3.50	CuBe	Gold, min. 1.27 µm, over nickel
Outer conductor P-SMP	Stainless steel	Passivated
Cupling Nut	CuBe or equiv.	Gold, min. 1.27 µm, over nickel
Dielectric	Stainless steel	Passivated
	PS	

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Electrical data

Frequency	DC to 26.5 GHz
Return loss	≥ 32 dB, DC to 4 GHz ≥ 28 dB, 4 GHz to 10 GHz ≥ 23 dB, 10 GHz to 18 GHz ≥ 19 dB, 18 GHz to 26.5 GHz

Mechanical data

	RPC-3.50	P-SMP
Mating cycles	≥ 500	≥ 100
Maximum torque	1.70 Nm	
Recommended torque	0.90 Nm	
Engagement force		Full detent 68 N
Disengagement force		Full detent 25 N
Gauge	0.00 mm to 0.08 mm	0.00 mm to 0.08 mm

General standard definition

For proper operation the vector network analyzer (VNA) needs a model describing the electrical behaviour of this calibration standard. The different models, units, and terms used will depend on the VNA type and they will have to be entered into the VNA. All values are based on typical geometry and plating.

Offset Z_o / Impedance / Z_o	50 Ω
Offset Delay	63.0641 ps
Length (electrical) / Offset Length	18.90 mm
Offset Loss	2.51 G Ω /s
Loss	0.0137 dB/ $\sqrt{\text{GHz}}$

Environmental data

Operating temperature range ¹	+20 °C to +26 °C
Rated temperature range of use ²	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C

RoHS compliant

¹ Temperature range over which these specifications are valid.

² This range is underneath and above the operating temperature range, within the calibration adaptor is fully functional and could be used without damage.