



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
HFM according to	RN_108-01

Documents

Application note	AN001 "Calibration Services"
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Material and plating

Connector parts

Center contact
Outer contact RPC-3.50
Outer contact HFM
Dielectric RPC-3.50
Dielectric HFM
Body
Housing HFM
Secondary lock HFM

Material

CuBe
Stainless steel
CuBe
PS
PEI
Brass
PBT GF20
PBT GF20

Plating

Gold, min. 1.27 µm, over chemical nickel
Passivated
Gold, min. 1.27 µm, over chemical nickel

AuroDur®, gold plated

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RF_35/05.10/6.1

Electrical data

Frequency	DC to 15 GHz
Return loss	≥ 34 dB, DC to 1 GHz ≥ 25 dB, 1 GHz to 6 GHz ≥ 20 dB, 6 GHz to 12 GHz ≥ 18 dB, 12 GHz to 15 GHz

Mechanical data

	RPC-3.50	HFM
Mating cycles	≥ 500	≥ 500 ³
Mating cycles housing		≥ 25
Maximum torque	1.70 N	
Recommend torque	0.80 Nm to 1.10 Nm	
Engagement force		≤ 15 N
Disengagement force		≥ 2 N
Gauge	0.00 mm to 0.08 mm	

³ Limitations are possible due to the quality of the used mating connector

General standard definition

For proper operation the vector network analyser (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_0 / Impedance / Z_0	50 Ω
Offset Delay	143.0889 ps
Length (electrical) / Offset Length	42.90 mm
Offset Loss	4.26 G Ω /s
Loss	0.0529 dB / \sqrt{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 open circuit is fully functional and could be used without damage

Declaration of calibration options

Factory Calibration

Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, **traceable to Rosenberger standards**, national / international standards are not available. Model based standard definitions are reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.

Accredited Calibration

Not available.

For further, more detailed information see application note AN001 on the Rosenberger homepage.

Calibration interval

Recommendation 12 months

Weight

7.7 g/pce

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Florian Reiner	08.03.16	Martin Moder	24.11.17	300	17-1951	M. Rahberger	24.11.17
Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.de						Tel. : +49 8684 18-0 Email : info@rosenberger.de	
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