



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

Interface

RPC-3.50 according to
RPC-3.50 mechanically compatible with
QMA according to

IEC 60169-23
RPC-2.92 and SMA
QLF® (Quick Lock Formula)
Rosenberger is an authorised QLF® manufacturer

Documents

Application note

AN001 "Calibration Services"

Material and plating

Connector parts

- Center conductor
- Outer conductor RPC-3.50
- Outer conductor QMA
- Dielectric
- Coupling Nut RPC-3.50

Material

- CuBe
- CuBe or equiv.
- CuBe or equiv.
- PS
- Stainless steel

Plating

- Gold, min. 1.27 µm, over nickel
- White bronze(e.g. Optalloy®)
- White bronze(e.g. Optalloy®)
- Passivated

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RF_35/09;14/6.2

Electrical data

Frequency	DC to 18 GHz
Return loss	≥ 32 dB, DC to 4 GHz ≥ 24 dB, 4 GHz to 18 GHz

Mechanical data

	RPC-3.50	QMA
Mating cycles	≥ 500	≥ 100
Maximum torque	1.70 Nm	
Recommended torque	0.90 Nm	
Engagement force		25 N
Disengagement force		20 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	73.4079 ps
Length (electrical) / Offset Length	22.00 mm
Offset Loss	2.51 G Ω /s
Loss	0.0159 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 specification 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.

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

Packing

Standard 1 pce in box
Weight 6.1 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
Herbert Babinger	28.09.04	Markus Müller	13.04.18	f00	18-0642	Marion Striegler	12.04.18

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