



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

Interface

RPC-3.50 side
According to IEC 60169-23
Mechanically compatible with RPC-2.92 and SMA

SMB Fakra side
According to DIN 72594-1

Documents

Application note AN001 "Calibration Services"

Material and plating

Connector parts

| Connector parts | Material | Plating |
|---------------------------|-----------------|---|
| Center conductor | CuBe | Gold, min. 1.27 μm , over nickel |
| Outer conductor RPC-3.50 | Stainless steel | Passivated |
| Outer conductor SMB Fakra | Brass | AuroDur®, gold plated |
| Dielectric RPC-3.50 | PS | |
| Dielectric SMB Fakra | PTFE | |
| Coupling nut RPC-3.50 | Stainless steel | Passivated |
| Housing SMB Fakra | PBT-GF20 | |
| Secondary Lock SMB Fakra | PBT-GF10 | |

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RF_35/09.14/6.2

Electrical data

| | |
|-------------|--|
| Frequency | DC to 6 GHz |
| Return loss | ≥ 35 dB, DC to 1 GHz ≥ 26 dB, 1 GHz to 3 GHz ≥ 21 dB, 3 GHz to 6 GHz |

Mechanical data

| | | |
|---------------------|--------------------|--|
| Mating cycles | RPC-3.50 ≥ 500 | SMB Fakra ≥ 500 (SMB Fakra Interface) ≥ 25 (SMB Fakra housing) |
| Maximum torque | 1.70 Nm | |
| Recommended torque | 0.90 Nm | |
| Engagement force | | ≤ 25 N |
| Disengagement force | | ≥ 2 N |
| Gauge | 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 | 157.3250 ps |
| Length (electrical) / Offset Length | 47.16 mm |
| Offset Loss | 2.07 G Ω /s |
| Loss | 0.0283 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 12.3 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 | 07.10.04 | S. Andorfer | 25.01.18 | f00 | 17-1935 | M. Knoll | 25.01.18 |
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