



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

Interface

According to
Mechanically compatible with

IEC 61169-35
RPC-3.50 and SMA

Documents

Application note

AN001 "Calibration Services"

Material and plating

Connector parts

Center conductor
Outer conductor
Coupling nut
Dielectric

Material

CuBe
Stainless steel
Stainless steel
PS

Plating

Gold, min. 1.27 µm, over nickel
Passivated
Passivated

Electrical data

Frequency range	DC to 40 GHz
Return loss	≤ 0.10 dB, DC to 4 GHz ≤ 0.15 dB, 4 GHz to 18 GHz ≤ 0.20 dB, 18 GHz to 40 GHz
Error from nominal phase ¹	$\leq 1.0^\circ$, DC to 4 GHz $\leq 2.0^\circ$, 4 GHz to 18 GHz $\leq 3.0^\circ$, 18 GHz to 40 GHz

¹ The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances.

Mechanical data

Mating cycles	≥ 500
Maximum torque	1.70 Nm
Recommended torque	0.90 Nm
Gauge	0.00 mm to 0.03 mm

General standard definitions

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	25.0173 ps
Length (electrical) / Offset Length	7.50 mm
Offset Loss	2.40 G Ω /s
Loss	0.0104 dB/ $\sqrt{\text{GHz}}$
Fringing Capacitances ²	

² Fringing Capacitances are determined individually for each open circuit and are documented in a Calibration Certificate.

Environmental data

Operating temperature range ³	+20 °C to +26 °C
Rated temperature range of use ⁴	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C

RoHS	compliant
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³ Temperature range over which these specification are valid.

⁴ This range is underneath and above the operating temperature range, within the open circuit is fully functional and could be used without damage.

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Technical Data Sheet				Rosenberger									
RPC-2.92		Open Circuit Plug		02S12L-000S3									
<div>Declaration of calibration options</div> <div>Factory Calibration</div> <p>Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, traceable to national / international standards. Model based standard definitions are individually optimized and reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.</p> <div>Accredited Calibration</div> <p>Optional this calibration standard can be delivered with an Accredited Calibration (DAkkS) having the highest confidence in the traceability. The DAkkS Calibration Certificate issued reports individual calibration results in a complex format, traceable to national / international standards. Model based standard definitions are individually optimized and reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format as well as in a dense data set needed for data based standard definitions. The uncertainties are smaller than in a Factory Calibration.</p> <p>For further, more detailed information see application note AN001 on the Rosenberger homepage.</p> <div>Calibration interval</div> <table><tr><td>Recommendation</td><td>12 months</td></tr></table> <div>Packing</div> <table><tr><td>Standard</td><td>1 pce in box</td></tr><tr><td>Weight</td><td>7.2 g/pce</td></tr></table>								Recommendation	12 months	Standard	1 pce in box	Weight	7.2 g/pce
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