



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

Interface

According to Rosenberger P-SMP

Documents

Application note AN001 "Calibration Services"

Material and plating

Connector parts

Center conductor
Outer conductor
Dielectric

Material

CuBe
CuBe
PS

Plating

Gold, min. 1.27 µm, over nickel
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Electrical data

Frequency range	DC to 10 GHz
Return loss	≤ 0.20 dB, DC to 4 GHz ≤ 0.35 dB, 4 GHz to 10 GHz
Error from nominal phase ¹	≤ 2°, DC to 4 GHz ≤ 4°, 4 GHz to 10 GHz

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

Mechanical data

Mating cycles	
- if mating part is Smooth bore, Catchers mitt	≥ 1000
- if mating part is Limited detent	≥ 500
- if mating part is Full detent	≥ 100
Engagement force	
- Smooth bore, Catchers mitt	≤ 10 N
- Limited detent	≤ 45 N
- Full detent	≤ 68 N
Disengagement force	
- Smooth bore, Catchers mitt	≥ 2.2 N
- Limited detent	≥ 15 N
- Full detent	≥ 25 N
Gauge	0.00 mm to 0.05 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_0 / Impedance / Z_0	50 Ω
Offset Delay	23.3495 ps
Length (electrical) / Offset Length	7.00 mm
Offset Loss	2.20 G Ω /s
Loss	0.0089 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

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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