



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

**Interface**

According to IEC 61169-26

**Documents**

Application note AN001 "Calibration Services"

**Material and plating**

**Connector parts**

Center conductor  
Outer conductor  
Dielectric

**Material**

CuBe  
Stainless steel  
PTFE

**Plating**

Gold, min. 1.27 µm, over nickel  
Passivated

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**Electrical data**

Frequency range	DC to 18 GHz
Return loss	$\leq 0.50$ dB, DC to 4 GHz $\leq 0.75$ dB, 4 GHz to 8 GHz $\leq 1.00$ dB, 8 GHz to 18 GHz
Error from nominal phase <sup>1</sup>	$\leq 1.0^\circ$ , DC to 4 GHz $\leq 3.5^\circ$ , 4 GHz to 8 GHz $\leq 7.0^\circ$ , 8 GHz to 18 GHz

<sup>1</sup> The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance.

**Mechanical data**

Mating cycles	$\geq 500$
Maximum torque	1.70 Nm
Recommended torque	0.55 Nm
Gauge	5.18 mm to 5.28 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 $\Omega$
Offset Delay	66.713 ps
Length (electrical) / Offset Length	20.00 mm
Offset Loss	1.20 G $\Omega$ /s
Loss	0.0139 dB/ $\sqrt{\text{GHz}}$
Short Inductance <sup>2</sup>	

<sup>2</sup> Short Inductances are determined individually for each Short circuit and are documented in a Calibration Certificate.

**Environmental data**

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

RoHS compliant

<sup>3</sup> Temperature range over which these specification are valid.

<sup>4</sup> This range is underneath and above the operating temperature range, within the short circuit is fully functional and could be used without damage.

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