



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

Interface

According to IEC 61169-24¹, EIA-550

¹ Accepts only limited pin diameter, see "Mechanical data".

Documents

Application note AN001 "Calibration Services"

Material and plating

Connector parts

Center contact
Outer contact

Material

CuBe
Stainless steel

Plating

Gold, min. 1.27 µm, over nickel
Passivated

Electrical data

Frequency range	DC to 6 GHz
Return loss	≤ 0.10 dB, DC to 4 GHz ≤ 0.15 dB, 4 GHz to 6 GHz
Error from nominal phase ²	≤ 1.0°, DC to 4 GHz ≤ 1.5°, 4 GHz to 6 GHz

² The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance.

Mechanical data

Mating cycles	≥ 1000
Maximum torque	6.78 Nm
Recommended torque	2.00 Nm
Permitted male pin diameter ³	0.76 mm to 0.86 mm
Gauge	0.00 mm to 0.10 mm

³ Connecting a F plug with larger male pin diameter will damage female contact fingers of this Short circuit. Use "full range adaptor" 74S121-K22S3 instead.

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	75 Ω
Offset Delay	53.370 ps
Length (electrical) / Offset Length	16.00 mm
Offset Loss	2.40 GΩ/s
Loss	0.0148 dB/√GHz
Short Inductance ⁴	

⁴ Short Inductances are determined individually for each Short circuit and are documented in a Calibration Certificate.

Environmental data

Operating temperature range ⁵	+20 °C to +26 °C
Rated temperature range of use ⁶	0 °C to +50 °C
Storage temperature range	- 40 °C to +85 °C

RoHS compliant

⁵ Temperature range over which these specification are valid.

⁶ This range is underneath and above the operating temperature range, within the short circuit is fully functional and could be used without damage.