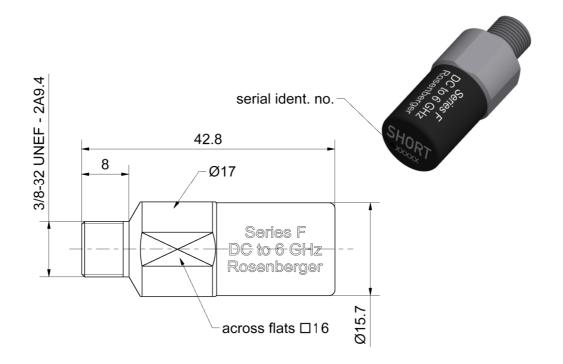
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F 75 Ω	Short Circuit Jack	74K12S-001S3



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

# Interface

According to

IEC 61169-24<sup>1</sup>, EIA-550

# **Documents**

Application note

AN001 "Calibration Services"

# Material and plating

**Connector parts** 

Center contact

Outer contact

Material Plating

CuBe Gold, min. 1.27 µm, over nickel

Stainless steel Passivated

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<sup>&</sup>lt;sup>1</sup> Accepts only limited pin diameter, see "Mechanical data".

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# RF\_35/09.14/6.2

# Rosenberger

F 75 Ω

Short Circuit Jack

**Technical Data Sheet** 

74K12S-001S3

# Electrical data

Frequency range DC to 6 GHz

Return loss  $\leq$  0.10 dB, DC to 4 GHz

 $\leq$  0.15 dB, 4 GHz to 6 GHz

Error from nominal phase<sup>2</sup>  $\leq 1.0^{\circ}$ , DC to 4 GHz

 $\leq$  1.5°, 4 GHz to 6 GHz

# Mechanical data

 $\begin{array}{ll} \text{Mating cycles} & \geq 1000 \\ \text{Maximum torque} & 6.78 \text{ Nm} \\ \text{Recommended torque} & 2.00 \text{ Nm} \\ \end{array}$ 

Permitted male pin diameter<sup>3</sup> 0.76 mm to 0.86 mm Gauge 0.00 mm to 0.10 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.

 $\begin{array}{lll} \mbox{Offset $Z_{\rm o}$ / Impedance / $Z_{\rm o}$} & 75 \ \Omega \\ \mbox{Offset Delay} & 53.370 \ ps \\ \mbox{Length (electrical) / Offset Length} & 16.00 \ mm \\ \mbox{Offset Loss} & 2.40 \ G\Omega/s \\ \mbox{Loss} & 0.0148 \ dB/\sqrt{\mbox{GHz}} \end{array}$ 

Short Inductance4

## **Environmental data**

Operating temperature range<sup>5</sup>  $+20 \,^{\circ}\text{C}$  to  $+26 \,^{\circ}\text{C}$  Rated temperature range of use<sup>6</sup>  $0 \,^{\circ}\text{C}$  to  $+50 \,^{\circ}\text{C}$  Storage temperature range  $-40 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$ 

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<sup>&</sup>lt;sup>2</sup> The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance.

<sup>3</sup> 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.

<sup>&</sup>lt;sup>4</sup> Short Inductances are determined individually for each Short circuit and are documented in a Calibration Certificate.

<sup>&</sup>lt;sup>5</sup> Temperature range over which these specification are valid.

<sup>&</sup>lt;sup>6</sup> This range is underneath and above the operating temperature range, within the short circuit is fully functional and could be used without damage.