



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

**Interface**

According to IEC 61169-24, EIA-550

**Documents**

Application note AN001 "Calibration Services"

**Material and plating**

**Connector parts**

|                | Material        | Plating                         |
|----------------|-----------------|---------------------------------|
| Center contact | CuBe            | Gold, min. 1.27 µm, over nickel |
| Outer contact  | Stainless steel | Passivated                      |
| Coupling nut   | Stainless steel | Passivated                      |

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RF\_35/09;14/6.2

**Electrical data**

|                                       |   |
|---------------------------------------|---|
| Frequency range                       | DC to 6 GHz   |
| Return loss                           | ≤ 0.10 dB, DC to 4 GHz<br>≤ 0.15 dB, 4 GHz to 6 GHz |
| Error from nominal phase <sup>1</sup> | ≤ 1.0°, DC to 4 GHz<br>≤ 1.5°, 4 GHz to 6 GHz       |

<sup>1</sup> 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            |
| Nominal pin diameter | 0.81 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.

|  |                |
|--|----------------|
| Offset Z <sub>0</sub> / Impedance / Z <sub>0</sub> | 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 <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.

# Technical Data Sheet

# Rosenberger

F 75  $\Omega$

Short Circuit  
Plug

74S12S-001S3

## Declaration of calibration options

### Factory Calibration

Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, **traceable to Rosenberger standards**, national / international standards are not available. Model based standard definitions are individually optimized and reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.

### Accredited Calibration

Not available.

*For further, more detailed information see application note AN001 on the Rosenberger homepage.*

## Calibration interval

Recommendation 12 months

## Packing

Standard 1 pce in box  
Weight 43.5 g/pce

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

| Draft          | Date     | Approved      | Date     | Rev. | Engineering change number | Name             | Date     |
|----------------|----------|---------------|----------|------|---------------------------|------------------|----------|
| Marcel Panicke | 08.08.18 | Markus Müller | 09.05.19 | b00  | 19-0897                   | Marion Striegler | 09.05.19 |

  

|  |   |               |
|--|---|---------------|
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