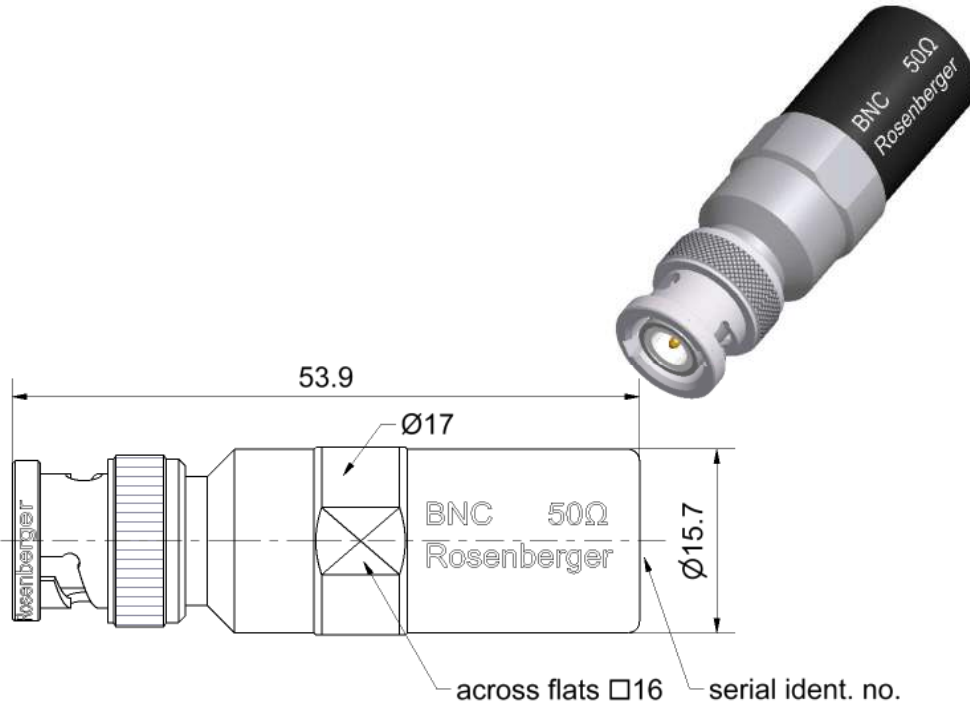


BNC  
50 Ω

Short Circuit  
Plug

**51S12S-000S3**



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

**Interface**

According to

IEC 60169-8, MIL-PRF-39012, CECC 22120

**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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RF\_35/05.10/6.0

BNC  
50 Ω

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**51S12S-000S3**

**Electrical data**

Frequency range	DC to 4 GHz
Return loss	≤ 0.20 dB, DC to 2 GHz ≤ 0.50 dB, 2 GHz to 4 GHz
Error from nominal phase <sup>1</sup>	≤ 2.5°, DC to 2 GHz ≤ 4.0°, 2 GHz to 4 GHz

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

**Mechanical data**

Mating cycles	≥ 500
Gauge	5.31 mm to 5.38 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>o</sub> / Impedance / Z <sub>o</sub>	50 Ω
Offset Delay	70.448 ps
Length (electrical) / Offset Length	21.12 mm
Offset Loss	1.2 GΩ/s
Loss	0.0147 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>2</sup>	+20 °C to +26 °C
Rated temperature range of use <sup>3</sup>	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C

RoHS compliant

<sup>2</sup> Temperature range over which these specifications are valid.

<sup>3</sup> This range is underneath and above the operating temperature range, within the open circuit is fully functional and could be used without damage.

# Technical Data Sheet

# Rosenberger

BNC  
50 Ω

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## 51S12S-000S3

### 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  
Weight

1 pce in box  
49 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
Herbert Babinger	26.01.05	Martin Moder	09.07.15	e00	14-1492	Manfred Ruf	09.07.15

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