

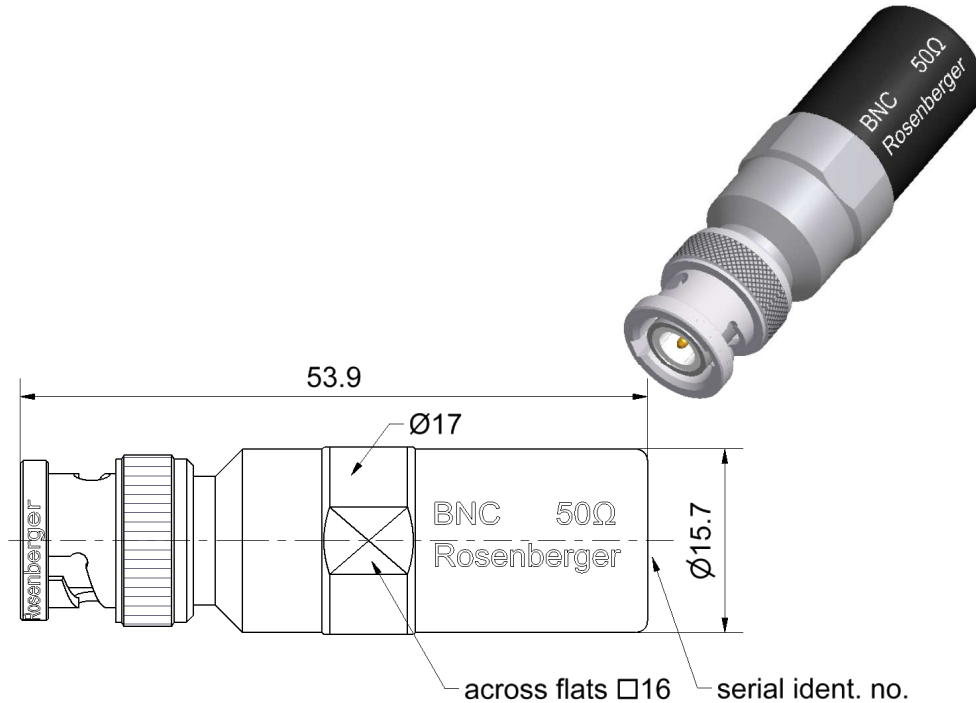
Technical Data Sheet

Rosenberger

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 μ m, over nickel
Passivated

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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 ¹	$\leq 2.5^\circ$, DC to 2 GHz
	$\leq 4.0^\circ$, 2 GHz to 4 GHz

¹ 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_0 / Impedance / Z_0	50 Ω
Offset Delay	70.448 ps
Length (electrical) / Offset Length	21.12 mm
Offset Loss	1.2 G Ω /s
Loss	0.0147 dB/ $\sqrt{\text{GHz}}$
Short Inductance ²	

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

Environmental data

Operating temperature range ²	+20 °C to +26 °C
Rated temperature range of use ³	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C

RoHS compliant

² Temperature range over which these specifications are valid.

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

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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
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