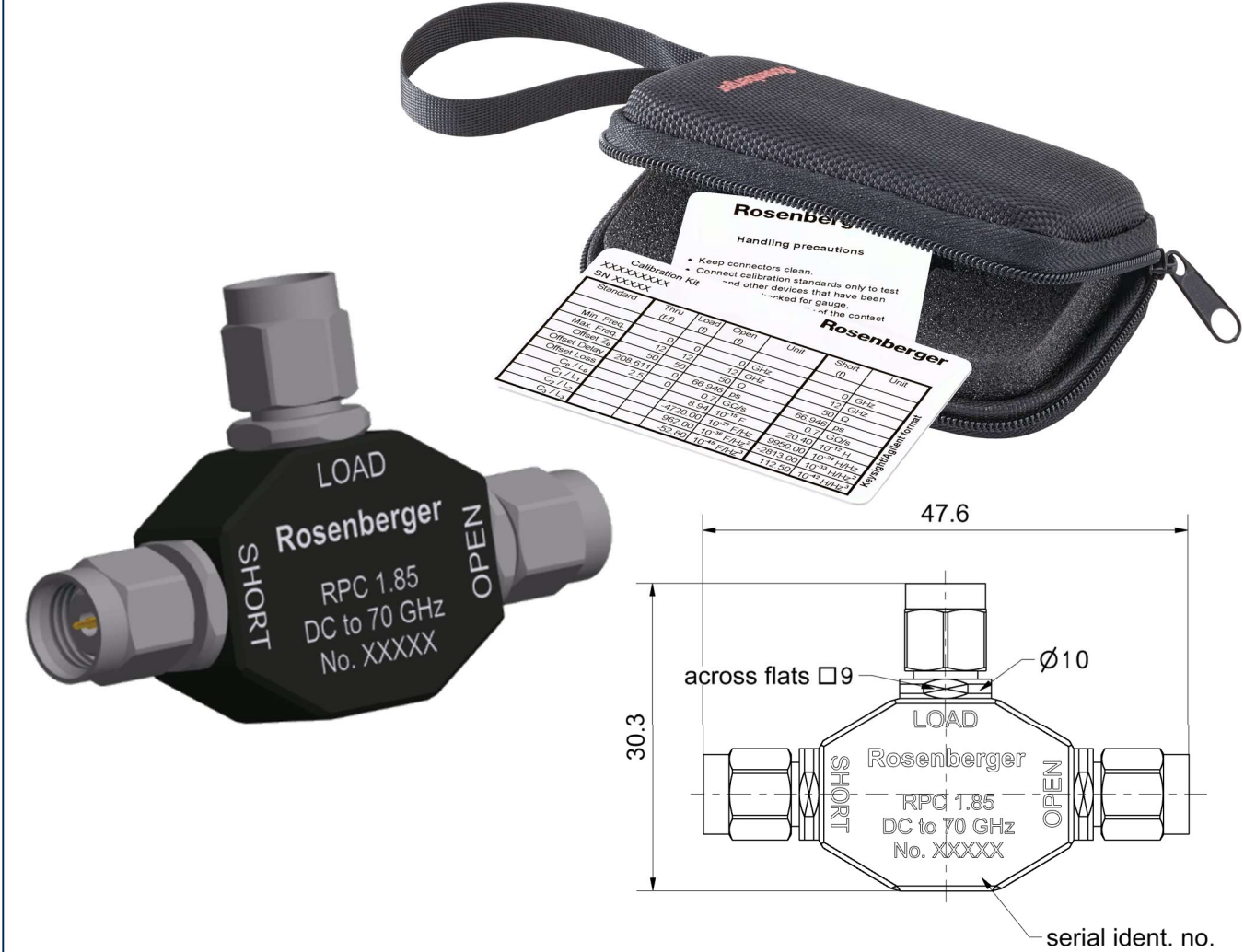


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Technical Data Sheet		Rosenberger
RPC-1.85	Calibration Kit Plug	08S30R-MSOS3



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

Interface

According to IEC 61169-32
Mechanically compatible with RPC-2.40

Contents and Documentation

- This kit is delivered with
- **Standard Definitions Card**
Printed Standard Definitions that can be used on nearly all Vector Network Analyzers
 - **Test Results Documentation**
 - **Hard Shell Case**
 - **Protection Caps**

Material and plating

Connector parts	Material	Plating
Center conductor	CuBe	Gold, min. 1.27 µm, over nickel
Outer conductor	Stainless steel	Passivated
Coupling nut	Stainless steel	Passivated
Body	Aluminum	black anodized
Dielectric	PS	
Substrate	Al ₂ O ₃	

Electrical data

Frequency range DC to 70.0 GHz

Open

Error from nominal phase¹

$\leq 2.0^\circ$, DC to 4 GHz
$\leq 5.0^\circ$, 4 GHz to 26.5 GHz
$\leq 7.0^\circ$, 26.5 GHz to 50 GHz
$\leq 10.0^\circ$, 50 GHz to 70 GHz

Short

Error from nominal phase²

$\leq 2.0^\circ$, DC to 4 GHz
$\leq 5.0^\circ$, 4 GHz to 26.5 GHz
$\leq 7.0^\circ$, 26.5 GHz to 50 GHz
$\leq 10.0^\circ$, 50 GHz to 70 GHz

Load

Return loss

≥ 35.0 dB, DC to 4 GHz
≥ 25.0 dB, 4 GHz to 26.5 GHz
≥ 22.0 dB, 26.5 GHz to 50 GHz
≥ 20.0 dB, 50 GHz to 70 GHz

DC Resistance $50 \Omega \pm 0.5 \Omega$

Power handling (at 25 °C, sea level) ≤ 0.5 W, derate by 0.005 W/K

¹ The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances

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

Mechanical data

Mating cycles	≥ 500
Maximum torque	1.65 Nm
Recommended torque	0.90 Nm
Gauge	0.00 mm to 0.03 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.

Open

Offset Z_0 / Impedance / Z_0	50 Ω
Offset Delay	16.678 ps
Length (electrical) / Offset Length	5.00 mm
Offset Loss	3.75 G Ω /s
Loss	0.0109 dB/ $\sqrt{\text{GHz}}$
Fringing Capacitances	$C_0 = 10.0000 \times 10^{-15} \text{ F} \quad / \quad 10.0000 \text{ fF}$ $C_1 = -500.000 \times 10^{-27} \text{ F/Hz} \quad / \quad -0.50000 \text{ fF /GHz}$ $C_2 = 11.5000 \times 10^{-36} \text{ F/Hz}^2 \quad / \quad 0.01150 \text{ fF /GHz}^2$ $C_3 = -0.10000 \times 10^{-45} \text{ F/Hz}^3 \quad / \quad -0.00010 \text{ fF /GHz}^3$

Technical Data Sheet				Rosenberger			
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Short Offset Z_o / Impedance / Z_o50 Ω Offset Delay16.678 ps Length (electrical) / Offset Length5.00 mm Offset Loss4.17 GΩ/s Loss0.0121 dB/ $\sqrt{\text{GHz}}$ Short Inductance $L_0 = -12.0000 \times 10^{-12} \text{ H} \quad / \quad -12.000 \text{ pH}$ $L_1 = 250.000 \times 10^{-24} \text{ H/Hz} \quad / \quad 0.25000 \text{ pH/GHz}$ $L_2 = -8.10000 \times 10^{-33} \text{ H/Hz}^2 \quad / \quad -0.00810 \text{ pH/GHz}^2$ $L_3 = 0.08000 \times 10^{-42} \text{ H/Hz}^3 \quad / \quad 0.00008 \text{ pH/GHz}^3$ Load Offset Z_o / Impedance / Z_o50 Ω Offset Delay0.0000 ps Length (electrical) / Offset Length0.000 mm Offset Loss0.00 GΩ/s Loss0.0000 dB/ $\sqrt{\text{GHz}}$							
Environmental data Operating temperature range³+ 20 °C to +26 °C Rated temperature range of use⁴0 °C to +50 °C Storage temperature range- 40 °C to +85 °C RoHScompliant							
³ Temperature range over which these specifications are valid. ⁴ This range is underneath and above the operating temperature range, within the calibration kit is fully functional and could be used without damage							
Declaration of documentation Standard delivery for this kit includes Test Results. The documentation issued reports which quantities were tested individually, traceable to national / international standards. Model based standard definitions of the calibration standards are reported in Agilent / Keysight, Rohde & Schwarz and Anritsu compatible VNA format.							
Inspection interval Recommendation12 months							
Packing Standard1 pce in bag Weight28 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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