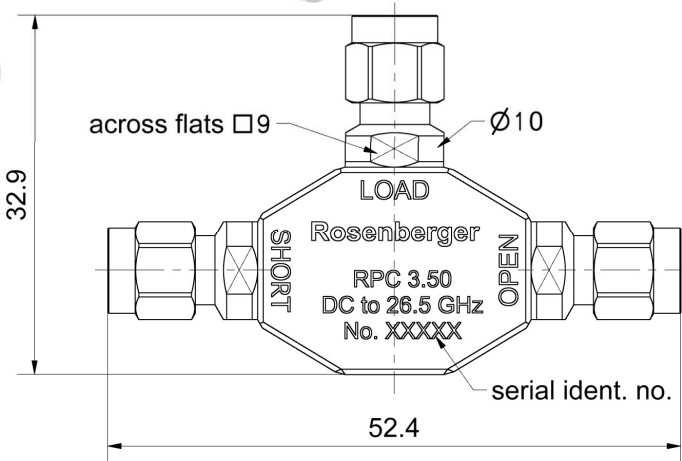


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Technical Data Sheet		Rosenberger	
RPC-3.50	Calibration Kit Plug	03S30R-MSOS3	
			
All dimensions are in mm; tolerances according to ISO 2768 m-H			
Interface			
According to		IEC 61169-23	
Mechanically compatible with		RPC-2.92 and SMA	
Contents and 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			
Center conductor	Material	Plating	
Outer conductor	CuBe	Gold, min. 1.27 µm, over nickel	
Coupling nut	Stainless steel	Passivated	
Body	Stainless steel	Passivated	
Dielectric	Aluminum	black anodized	
Substrate	PS		
	Al ₂ O ₃		
Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.de		Tel. : +49 8684 18-0 Email : info@rosenberger.de	
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Electrical data

Frequency range DC to 26.5 GHz

Open

Error from nominal phase¹

- ≤ 1.0°, DC to 4 GHz
- ≤ 2.0°, 4 GHz to 8 GHz
- ≤ 3.0°, 8 GHz to 26.5 GHz

Short

Error from nominal phase²

- ≤ 1.0°, DC to 4 GHz
- ≤ 2.0°, 4 GHz to 8 GHz
- ≤ 3.0°, 8 GHz to 26.5 GHz

Load

Return loss

- ≥ 40.0 dB, DC to 4 GHz
- ≥ 35.0 dB, 4 GHz to 8 GHz
- ≥ 30.0 dB, 8 GHz to 26.5 GHz

DC Resistance 50 Ω ± 0.5 Ω

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 1.70 Nm

Recommended torque 0.90 Nm

Gauge 0.00 mm to 0.08 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 Z₀ / Impedance / Z₀ 50 Ω

Offset Delay 33.356 ps

Length (electrical) / Offset Length 10.00 mm

Offset Loss 2.20 GΩ/s

Loss 0.0127 dB/√GHz

Fringing Capacitances

- C₀ = -17.000 x 10⁻¹⁵ F / -17.000 fF
- C₁ = -2000.0 x 10⁻²⁷ F/Hz / -2.0000 fF /GHz
- C₂ = 147.00 x 10⁻³⁶ F/Hz² / 0.1470 fF /GHz²
- C₃ = -3.0000 x 10⁻⁴⁵ F/Hz³ / -0.0030 fF /GHz³

Technical Data Sheet				Rosenberger																			
RPC-3.50		Calibration Kit Plug		03S30R-MSOS3																			
Short Offset Z_o / Impedance / Z_o50 Ω Offset Delay33.357 ps Length (electrical) / Offset Length10.00 mm Offset Loss2.36 GΩ/s Loss0.0137 dB/√GHz Short Inductance L₀ = -39.000 x 10⁻¹² H / -39.000 pH L₁ = 2200.0 x 10⁻²⁴ H/Hz / 2.2000 pH /GHz L₂ = -150.00 x 10⁻³³ H/Hz² / -0.1500 pH /GHz² L₃ = 3.0000 x 10⁻⁴² H/Hz³ / 0.0030 pH /GHz³ 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/√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 Weight26.4 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. <table><tr><td>Draft</td><td>Date</td><td>Approved</td><td>Date</td><td>Rev.</td><td>Engineering change number</td><td>Name</td><td>Date</td></tr><tr><td>Marcel Panicke</td><td>07.01.16</td><td>Markus Müller</td><td>29.04.20</td><td>f00</td><td>19-2083</td><td>Marion Striegler</td><td>29.04.20</td></tr></table> Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.de Tel. : +49 8684 18-0 Email : info@rosenberger.de Page 3 / 3								Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date	Marcel Panicke	07.01.16	Markus Müller	29.04.20	f00	19-2083	Marion Striegler	29.04.20
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