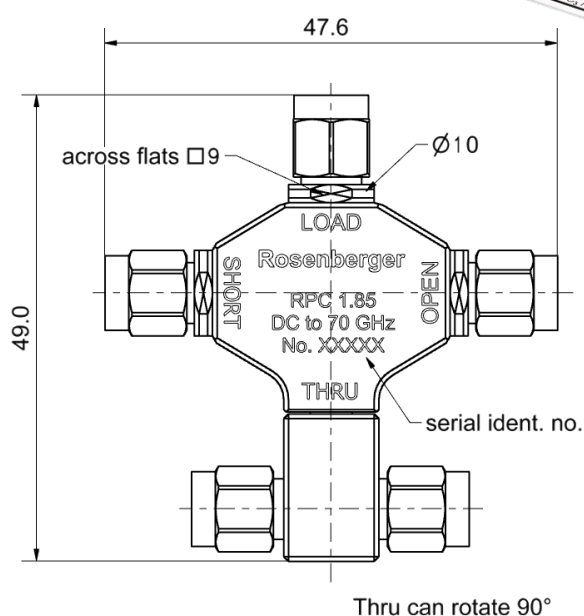


Technical Data Sheet

Rosenberger

RPC-1.85

Calibration Kit
Plug**08S30R-MSOTS3**

Thru can rotate 90°



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

InterfaceAccording to
Mechanically compatible withIEC 61169-32
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
- **Certificate of Testing**
- **Hard Shell Case**
- **Protection Caps**
- **User Manual**

Material and plating**Connector parts**Center conductor
Outer conductor
Coupling nut
Body
Dielectric
Substrate**Material**CuBe
Stainless steel
Stainless steel
Aluminum
PS
Al₂O₃**Plating**Gold, min. 1.27 µm, over nickel
Passivated
Passivated
black anodized

Technical Data Sheet		Rosenberger
RPC-1.85	Calibration Kit Plug	08S30R-MSOTS3
Electrical data Frequency range DC to 70 GHz Thru Return loss ≥ 28 dB, DC to 4 GHz ≥ 21 dB, 4 GHz to 26.5 GHz ≥ 20 dB, 26.5 GHz to 50 GHz ≥ 17 dB, 50 GHz to 70 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 0.05 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. Thru Offset Z_0 / Impedance / Z_0 50 Ω Offset Delay 84.492 ps Length (electrical) / Offset Length 25.33 mm Offset Loss 4.00 GΩ/s Loss 0.0294 dB/$\sqrt{\text{GHz}}$ Line Loss @ 1GHz 0.0012 dB/mm Load Offset Z_0 / Impedance / Z_0 50 Ω Offset Delay 0.0000 ps Length (electrical) / Offset Length 0.000 mm Offset Loss 0.00 GΩ/s Loss 0.0000 dB/$\sqrt{\text{GHz}}$		
Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.com		Tel. : +49 8684 18-0 Email : info@rosenberger.com
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Technical Data Sheet

Rosenberger

RPC-1.85

Calibration Kit
Plug**08S30R-MSOTS3****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	$C_0 = 10.0000 \times 10^{-15} \text{ F}$	/ 10.0000 fF
	$C_1 = -500.000 \times 10^{-27} \text{ F/Hz}$	/ -0.50000 fF /GHz
	$C_2 = 11.5000 \times 10^{-36} \text{ F/Hz}^2$	/ 0.01150 fF /GHz ²
	$C_3 = -0.10000 \times 10^{-45} \text{ F/Hz}^3$	/ -0.00010 fF /GHz ³

Short

Offset Z_0 / Impedance / Z_0	50 Ω	
Offset Delay	16.678 ps	
Length (electrical) / Offset Length	5.00 mm	
Offset Loss	4.17 G Ω /s	
Loss	0.0121 dB/ $\sqrt{\text{GHz}}$	
Short Inductance	$L_0 = -12.0000 \times 10^{-12} \text{ H}$	/ -12.000 pH
	$L_1 = 250.000 \times 10^{-24} \text{ H/Hz}$	/ 0.25000 pH/GHz
	$L_2 = -8.10000 \times 10^{-33} \text{ H/Hz}^2$	/ -0.00810 pH/GHz ²
	$L_3 = 0.08000 \times 10^{-42} \text{ H/Hz}^3$	/ 0.00008 pH/GHz ³

Environmental data

Operating temperature range ³	+20 °C to +26 °C
Rated temperature range of use ⁴	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C
RoHS	compliant

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

Recommendation	12 months
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Packing

Weight	34 g/pce
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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.

For the installation of the electrotechnical equipment, particular electrotechnical expertise is required.



Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Marcel Panicke	12.04.18	Lars Ramtke	30.05.23	c00	23-0004	Marion Striegler	23.05.23
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