

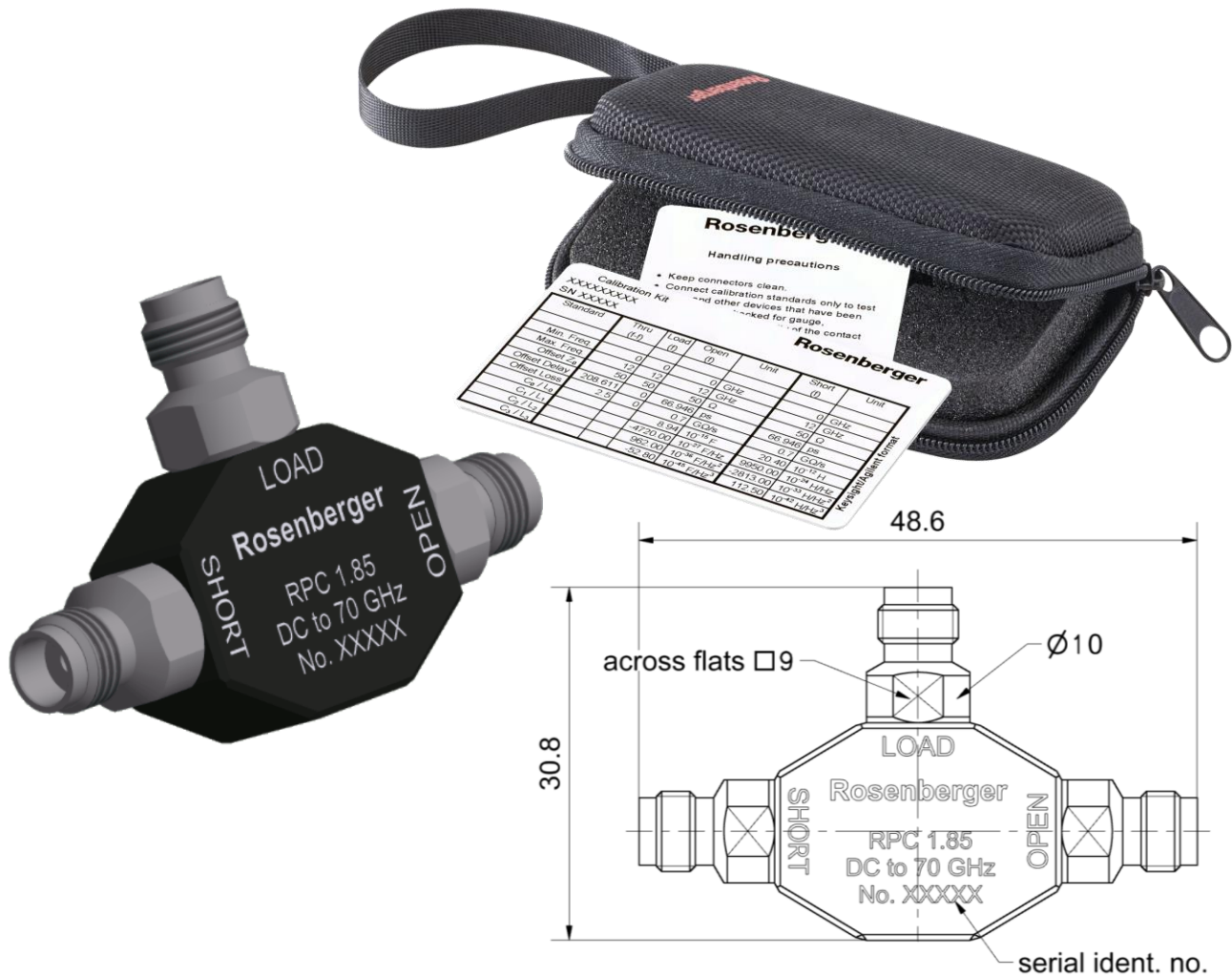
Technical Data Sheet

Rosenberger

RPC-1.85

Calibration Kit
Jack

08K30R-MSOS3



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

Interface

According to
Mechanically compatible with

IEC 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
Body
Dielectric
Substrate

Material

CuBe
Stainless steel
Aluminum
PS
Al₂O₃

Plating

Gold, min. 1.27 µm, over nickel
Passivated
black anodized

Electrical data

Frequency range DC to 70.0 GHz

Open

Error from nominal phase¹

≤ 2.0°, DC to 4 GHz
≤ 5.0°, 4 GHz to 26.5 GHz
≤ 7.0°, 26.5 GHz to 50 GHz
≤ 10.0°, 50 GHz to 70 GHz

Short

Error from nominal phase²

≤ 2.0°, DC to 4 GHz
≤ 5.0°, 4 GHz to 26.5 GHz
≤ 7.0°, 26.5 GHz to 50 GHz
≤ 10.0°, 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 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	1.65 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 GΩ/s
Loss	0.0109 dB/√GHz
Fringing Capacitances	$C_0 = 1.70000 \times 10^{-15} \text{ F} \quad / \quad 1.70000 \text{ fF}$ $C_1 = 170.000 \times 10^{-27} \text{ F/Hz} \quad / \quad 0.17000 \text{ fF /GHz}$ $C_2 = -6.30000 \times 10^{-36} \text{ F/Hz}^2 \quad / \quad -0.00630 \text{ fF /GHz}^2$ $C_3 = 0.04000 \times 10^{-45} \text{ F/Hz}^3 \quad / \quad 0.00004 \text{ fF /GHz}^3$

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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/ √GHz Short Inductance L₀ = -21.0000 x 10⁻¹² H / -21.000 pH L₁ = 700.000 x 10⁻²⁴ H/Hz / 0.70000 pH/GHz L₂ = -15.0000 x 10⁻³³ H/Hz² / -0.01500 pH/GHz² L₃ = 0.10000 x 10⁻⁴² H/Hz³ / 0.00010 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 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. For the installation of the electrotechnical equipment, particular electrotechnical expertise is required. 							
Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Marcel Panicke	31.01.17	Lars Ramtke	30.05.23	c00	23-0004	Marion Striegler	23.05.23
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			Page 3 / 3

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