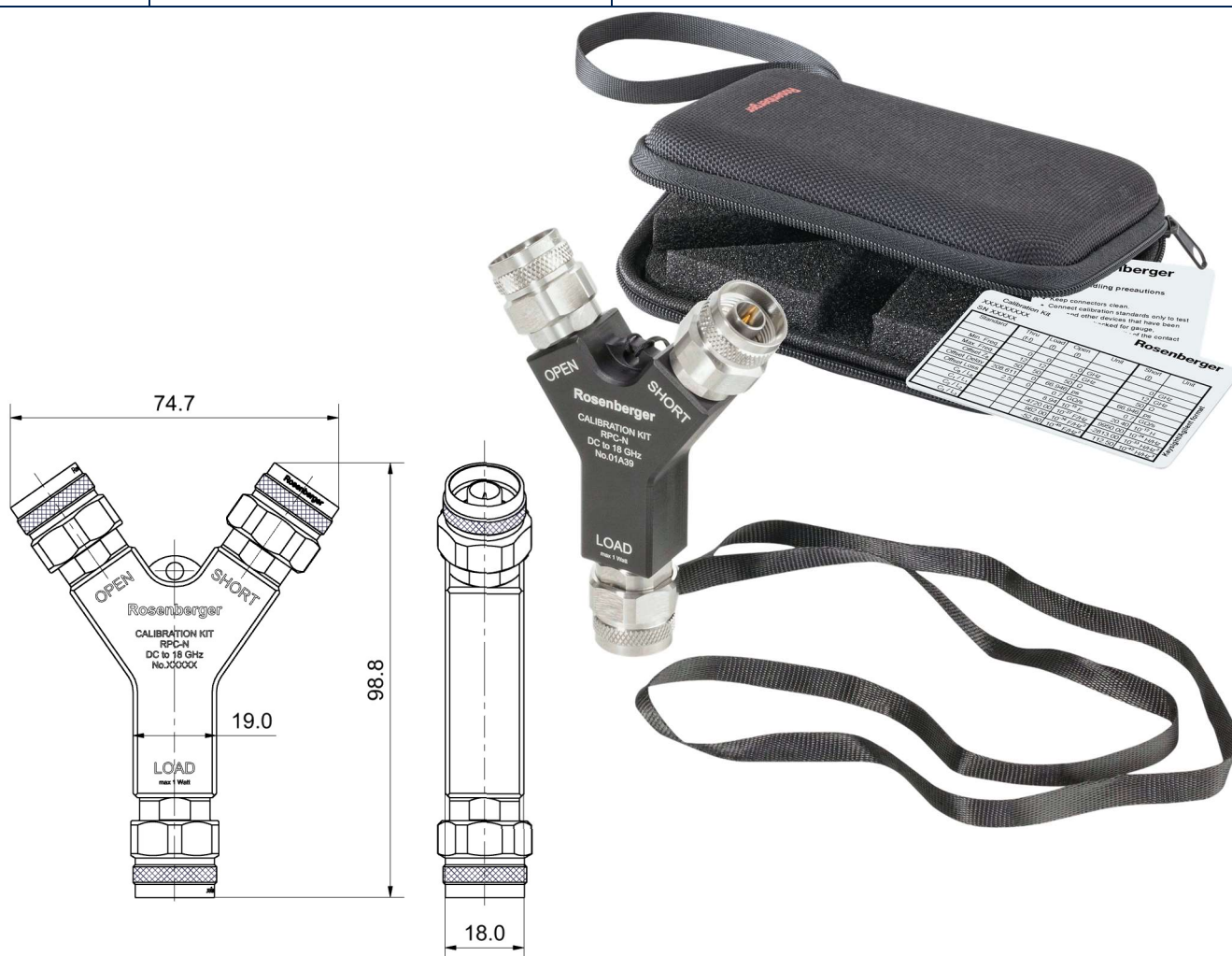




All dimensions are in mm; tolerances according to ISO 2768 m-H

Interface

According to

IEC 61169-16

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**
- **Lanyard**
- **Hard Shell Case**
- **Protection Caps**

Material and plating

Connector parts

Center conductor
Outer conductor
Coupling nut
Body
Dielectric
Substrate

Material

CuBe
Stainless steel
Stainless steel
Aluminum
PPE
Al₂O₃

Plating

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

Technical Data Sheet		Rosenberger	
RPC-N 50 Ω	Calibration Kit Plug	05S30R-MSOS3	
Electrical data Frequency rangeDC to 18 GHz OpenError from nominal phase¹ ≤ 2.0°, DC to 6 GHz ≤ 3.0°, 6 GHz to 9 GHz ≤ 4.0°, 9 GHz to 18 GHz ShortError from nominal phase² ≤ 1.5°, DC to 6 GHz ≤ 2.0°, 6 GHz to 9 GHz ≤ 2.5°, 9 GHz to 18 GHz LoadReturn loss ≥ 42 dB, DC to 6 GHz ≥ 36 dB, 6 GHz to 9 GHz ≥ 30 dB, 9 GHz to 18 GHz DC-Resistance50 Ω ± 0.5 Ω Power handling (at 25 °C, sea level)≤ 1.0 W, derate by 0.01 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 torque1.70 Nm Recommended torque1.10 Nm Gauge5.28 mm to 5.32 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 / Z₀50 Ω Offset Delay73.384 ps Length (electrical) / Offset Length22.00 mm Offset Loss0.80 GΩ/s Loss0.0102 dB/√GHz Fringing Capacitances C₀ = -14.2000 x 10⁻¹⁵ F / -14.2000 fF C₁ = 400.000 x 10⁻²⁷ F/Hz / 0.40000 fF /GHz C₂ = -16.0000 x 10⁻³⁶ F/Hz² / -0.01600 fF /GHz² C₃ = 1.00000 x 10⁻⁴⁵ F/Hz³ / 0.00100 fF /GHz³			
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 2 / 3

Technical Data Sheet				Rosenberger																			
RPC-N 50 Ω		Calibration Kit Plug		05S30R-MSOS3																			
Short Offset Z₀ / Impedance / Z₀50 Ω Offset Delay73.384 ps Length (electrical) / Offset Length22.00 mm Offset Loss0.80 GΩ/s Loss0.0102 dB/ √GHz Short Inductance L₀ = -27.0000 x 10⁻¹² H / -27.0000 pH L₁ = 7200.00 x 10⁻²⁴ H/Hz / 7.20000 pH/GHz L₂ = -800.000 x 10⁻³³ H/Hz² / -0.80000 pH/GHz² L₃ = 26.0000 x 10⁻⁴² H/Hz³ / 0.02600 pH/GHz³ Load Offset Z₀ / Impedance / Z₀50 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 Weight178 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>26.11.14</td><td>Markus Müller</td><td>08.05.20</td><td>f00</td><td>20-1038</td><td>Marion Striegler</td><td>11.05.20</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	26.11.14	Markus Müller	08.05.20	f00	20-1038	Marion Striegler	11.05.20
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