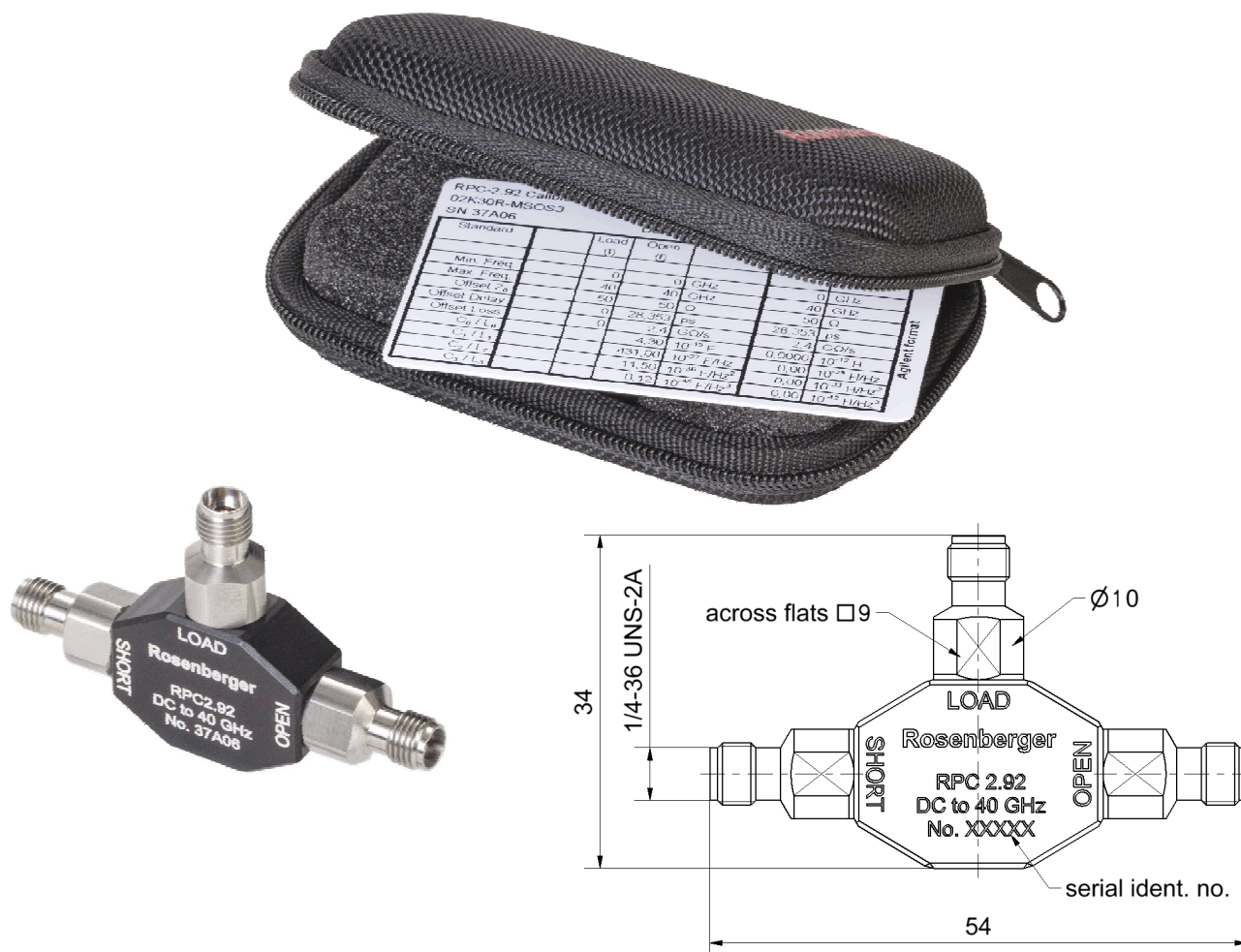




All dimensions are in mm; tolerances according to ISO 2768 m-H

Interface

According to
Mechanically compatible with

IEC 61169-35
RPC-3.50 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**

Material and plating

Connector parts

Center conductor
Outer conductor
Body
Dielectric
Substrate

Material

Beryllium copper
Stainless steel
Aluminum
PS
 Al_2O_3

Plating

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

Electrical data

Frequency range DC to 40.0 GHz

Open

Error from nominal phase¹

$\leq 1.5^\circ$, DC to 4 GHz
$\leq 4.0^\circ$, 4 GHz to 26.5 GHz
$\leq 5.0^\circ$, 26.5 GHz to 40.0 GHz

Short

Error from nominal phase²

$\leq 1.5^\circ$, DC to 4 GHz
$\leq 4.0^\circ$, 4 GHz to 26.5 GHz
$\leq 5.0^\circ$, 26.5 GHz to 40.0 GHz

Load

Return loss

≥ 40.0 dB, DC to 4 GHz
≥ 28.0 dB, 4 GHz to 26.5 GHz
≥ 25.0 dB, 26.5 GHz to 40.0 GHz

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

Power handling ≤ 0.5 W

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 Z_o / Impedance / Z_o	50 Ω	
Offset Delay	28.353 ps	
Length (electrical) / Offset Length	8.50 mm	
Offset Loss	2.40 G Ω /s	
Loss	0.0118 dB/ $\sqrt{\text{GHz}}$	
Fringing Capacitances	$C_0 = -4.30000 \times 10^{-15}$ F	/ -4.30000 fF
	$C_1 = 431.000 \times 10^{-27}$ F/Hz	/ 0.43100 fF /GHz
	$C_2 = -11.5000 \times 10^{-36}$ F/Hz ²	/ -0.01150 fF /GHz ²
	$C_3 = 0.12000 \times 10^{-45}$ F/Hz ³	/ 0.00012 fF /GHz ³

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RF_35/09.14/6.2

Technical Data Sheet				Rosenberger			
RPC-2.92		Calibration Kit Jack		02K30R-MSOS3			
Short Offset Z_o / Impedance / Z_o Offset Delay Length (electrical) / Offset Length Offset Loss Loss Short Inductance $L_0 = 0.0000 \times 10^{-12} \text{ H}$ $L_1 = 0.0000 \times 10^{-24} \text{ H/Hz}$ $L_2 = 0.0000 \times 10^{-33} \text{ H/Hz}^2$ $L_3 = 0.0000 \times 10^{-42} \text{ H/Hz}^3$ 50 Ω 28.353 ps 8.50 mm 2.40 GΩ/s 0.0118 dB/$\sqrt{\text{GHz}}$ / 0.0000 pH 0.0000 pH/GHz 0.0000 pH/GHz² 0.0000 pH/GHz³ Load Offset Z_o / Impedance / Z_o Offset Delay Length (electrical) / Offset Length Offset Loss Loss 50 Ω 0.0000 ps 0.000 mm 0.00 GΩ/s 0.0000 dB/$\sqrt{\text{GHz}}$							
Environmental data Operating temperature range³ Rated temperature range of use⁴ Storage temperature range RoHS +20 °C to +26 °C 0 °C to +50 °C -40 °C to +85 °C 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							
Packing Standard Weight 1 pce in bag 27.6 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 Marcel Panicke 05.11.15 Markus Müller 02.05.18				Rev. Engineering change number Name Date f00 18-0787 Marion Striegler 02.05.18			
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