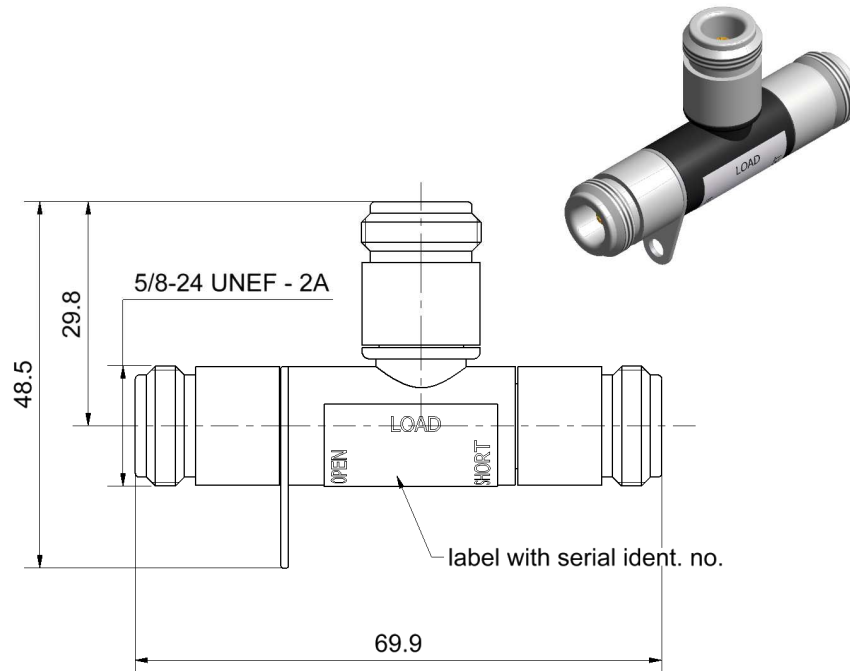




All dimensions are in mm; tolerances according to ISO 2768 m-H

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
- **Lanyard**
- **Hard Shell Case**

Material and plating

Connector parts

Center conductor
Outer conductor
Body
Dielectric
Substrate

Material

CuBe
Brass
Brass
PTFE / PPE
Al₂O₃

Plating

Gold, min. 1.27 µm, over nickel
Flash white bronze over silver(e.g. Optargen®)
powder-coated

Electrical data

Frequency range DC to 8 GHz

Open

Error from nominal phase¹
 $\leq 3.0^\circ$, DC to 6 GHz
 $\leq 5.0^\circ$, 6 GHz to 8 GHz

Short

Error from nominal phase²
 $\leq 2.0^\circ$, DC to 6 GHz
 $\leq 4.0^\circ$, 6 GHz to 8 GHz

Load

Return loss
 ≥ 42 dB, DC to 2.5 GHz
 ≥ 38 dB, 2.5 GHz to 6 GHz
 ≥ 35 dB, 6 GHz to 8 GHz
 DC Resistance 50 Ω ± 0.5 Ω
 Power handling ≤ 1.0 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 1.10 Nm
 Gauge 4.75 mm to 5.26 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 37.359 ps
 Length (electrical) / Offset Length 11.20 mm
 Offset Loss 0.80 GΩ/s
 Loss 0.0052 dB/√GHz
 Fringing Capacitances
 $C_0 = 1.20000 \times 10^{-15}$ F / 1.20000 fF
 $C_1 = 4300.00 \times 10^{-27}$ F/Hz / 4.30000 fF /GHz
 $C_2 = -1400.00 \times 10^{-36}$ F/Hz² / -1.40000 fF /GHz²
 $C_3 = 99.0000 \times 10^{-45}$ F/Hz³ / 0.09900 fF /GHz³

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RF_35/09.14/6.2

Technical Data Sheet				Rosenberger			
N 50 Ω		Calibration Kit Jack		53K38R-MSON3			
<div><div>Short</div><div>Offset Z₀ / Impedance / Z₀50 Ω</div><div>Offset Delay37.359 ps</div><div>Length (electrical) / Offset Length11.20 mm</div><div>Offset Loss0.80 GΩ/s</div><div>Loss0.0052 dB/√GHz</div><div>Short InductanceL₀ = -1.15000 x 10⁻¹² H / -1.15000 pH</div><div>L₁ = 8220.00 x 10⁻²⁴ H/Hz / 8.22000 pH/GHz</div><div>L₂ = -1270.00 x 10⁻³³ H/Hz² / -1.27000 pH/GHz²</div><div>L₃ = 42.0000 x 10⁻⁴² H/Hz³ / 0.04200 pH/GHz³</div><div>Load</div><div>Offset Z₀ / Impedance / Z₀50 Ω</div><div>Offset Delay0.0000 ps</div><div>Length (electrical) / Offset Length0.000 mm</div><div>Offset Loss0.00 GΩ/s</div><div>Loss0.0000 dB/√GHz</div><div>Environmental data</div><div>Operating temperature range³0 °C to +50 °C</div><div>Storage temperature range-40 °C to +85 °C</div><div>RoHScompliant</div><div>³ Temperature range over which these specifications are valid.</div><div>Packing</div><div>Standard1 pce in bag</div><div>Weight125 g/pce</div></div>							
Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Marcel Panicke	26.11.14	Markus Müller	05.11.15	a00	15-s354	Marion Striegler	05.11.15
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