



**Material and plating**

**Connector parts**

Center conductor  
Outer conductor  
Body  
Dielectric  
Substrate

**Material**

CuBe  
CuBe or equiv.  
Aluminum  
PMP  
Al<sub>2</sub>O<sub>3</sub>

**Plating**

Gold, min. 1.27 µm  
Gold, min. 1.27 µm  
black anodized

**Electrical specifications**

These electrical specifications are only valid when the specific VNA files or the specific S1P-files are used as standard definitions. They include measurement uncertainties as well as guard bands to cover some tear and wear of the calibration standards.

Residual System Data*	Frequency	Specification (plug and jack)
<b>Directivity</b>	0.01 GHz to ≤ 40 GHz	≥ 33 dB
	> 40 GHz to ≤ 80 GHz	≥ 29 dB
	> 80 GHz to ≤ 90 GHz	≥ 26 dB
<b>Source Match</b>	0.01 GHz to ≤ 30 GHz	≥ 32 dB
	> 30 GHz to ≤ 60 GHz	≥ 27 dB
	> 60 GHz to ≤ 80 GHz	≥ 24 dB
	> 80 GHz to ≤ 90 GHz	≥ 21 dB
<b>Reflection Tracking</b>	0.01 GHz to ≤ 20 GHz	≤ 0.20 dB
	> 20 GHz to ≤ 40 GHz	≤ 0.25 dB
	> 40 GHz to ≤ 60 GHz	≤ 0.30 dB
	> 60 GHz to ≤ 80 GHz	≤ 0.45 dB
	> 80 GHz to ≤ 90 GHz	≤ 0.55 dB

\* Residual System Data are also called Effective System Data

**Thru**

Return loss  
 ≥ 28 dB, DC to 10 GHz  
 ≥ 19 dB, 10 GHz to 50 GHz  
 ≥ 15 dB, 50 GHz to 90 GHz

**Load**

Return loss  
(typical values)  
 ≥ 30 dB, DC to 10 GHz  
 ≥ 24 dB, 10 GHz to 30 GHz  
 ≥ 21 dB, 30 GHz to 40 GHz  
 ≥ 18 dB, 40 GHz to 50 GHz  
 ≥ 15 dB, 50 GHz to 90 GHz

DC Resistance  
 50 Ω ± 0.5 Ω

Power handling (at 25 °C, sea level)  
 ≤ 0.5 W, derate by 0.005 W/K

# Technical Data Sheet

# Rosenberger

RPC-1.35

Calibration Kit  
Jack

P9K30R-MSOTD3

## Mechanical data

Mating cycles	≥ 3000
Maximum torque	1.65 Nm
Recommended torque	0.90 Nm
Gauge	0.003 mm to 0.05 mm

## General standard definitions

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 $\Omega$
Offset Delay	75.852 ps
Length (electrical) / Offset Length	22.74 mm
Offset Loss	5.95 G $\Omega$ /s
Loss	0.0784 dB/ $\sqrt{\text{GHz}}$
Line Loss @ 1GHz	0.0012 dB/mm

## Environmental data

Operating temperature range <sup>1</sup>	+20 °C to +26 °C
Rated temperature range of use <sup>2</sup>	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C
RoHS	compliant

<sup>1</sup> Temperature range over which these specifications are valid.

<sup>2</sup> 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 Calibration options

### Factory Calibration

Standard delivery for this kit includes a Factory Calibration. All calibration standards are reported in a Calibration Certificate with their individual calibration results, traceable to national / international standards. Data based definitions of the calibration standards are reported as data files for Vector Network Analyzer Families PNA (Keysight/Agilent) and ZVA (Rohde&Schwarz) as well as S1P-files for Open, Short and Load calibration standards.

Accredited Calibration  
Not available.

For further, more detailed information see application note AN001 on the Rosenberger homepage.

## Calibration Interval

Recommendation	12 months
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## Packing

Standard	1 pce in bag
Weight	32.9 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.



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