

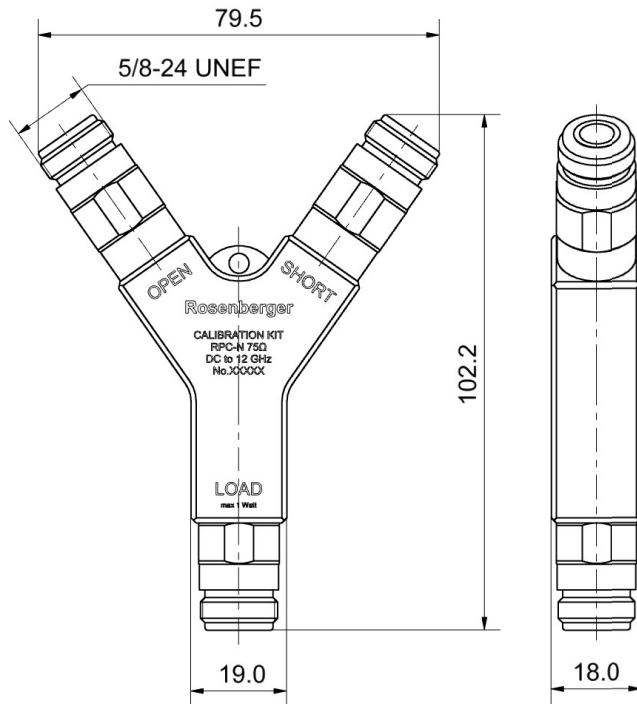
Technical Data Sheet

Rosenberger

RPC-N
75 Ω

Calibration Kit
Jack

P5K30R-MSOS3



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
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 12 GHz

Open

Error from nominal phase¹

- ≤ 3.0°, DC to 4 GHz
- ≤ 5.0°, 4 GHz to 8 GHz
- ≤ 6.0°, 8 GHz to 12 GHz

Short

Error from nominal phase²

- ≤ 2.5°, DC to 4 GHz
- ≤ 4.0°, 4 GHz to 8 GHz
- ≤ 5.0°, 8 GHz to 12 GHz

Load

Return loss

- ≥ 38 dB, DC to 4 GHz
- ≥ 32 dB, 4 GHz to 8 GHz
- ≥ 30 dB, 8 GHz to 12 GHz

DC-Resistance 75 Ω ± 0.75 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 torque 1.70 Nm

Recommended torque 1.10 Nm

Gauge 5.18 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 Z₀ / Impedance / Z₀ 75 Ω

Offset Delay 41.095 ps

Length (electrical) / Offset Length 12.32 mm

Offset Loss 1.20 GΩ/s

Loss 0.0057 dB/√GHz

Fringing Capacitances

- C₀ = 8.50000 x 10⁻¹⁵ F / 8.50000 fF
- C₁ = 9950.00 x 10⁻²⁷ F/Hz / 9.95000 fF /GHz
- C₂ = -2190.00 x 10⁻³⁶ F/Hz² / -2.19000 fF /GHz²
- C₃ = 107.000 x 10⁻⁴⁵ F/Hz³ / 0.10700 fF /GHz³

Dieses Dokument ist urheberrechtlich geschützt • This document is protected by copyright • Rosenberger Hochfrequenztechnik GmbH & Co. KG

RF_35/09_14/6.2

Technical Data Sheet

Rosenberger

RPC-N
75 Ω

Calibration Kit
Jack

P5K30R-MSOS3

Short

| | |
|-------------------------------------|---|
| Offset Z_o / Impedance / Z_o | 75 Ω |
| Offset Delay | 41.095 ps |
| Length (electrical) / Offset Length | 12.32 mm |
| Offset Loss | 1.20 GΩ/s |
| Loss | 0.0057 dB/√GHz |
| Short Inductance | $L_0 = -54.0000 \times 10^{-12} \text{ H} \quad / \quad -54.0000 \text{ pH}$ |
| | $L_1 = 9950.00 \times 10^{-24} \text{ H/Hz} \quad / \quad 9.95000 \text{ pH/GHz}$ |
| | $L_2 = 970.000 \times 10^{-33} \text{ H/Hz}^2 \quad / \quad 0.97000 \text{ pH/GHz}^2$ |
| | $L_3 = -115.000 \times 10^{-42} \text{ H/Hz}^3 \quad / \quad -0.11500 \text{ pH/GHz}^3$ |

Load

| | |
|-------------------------------------|----------------|
| Offset Z_o / Impedance / Z_o | 50 Ω |
| Offset Delay | 0.0000 ps |
| Length (electrical) / Offset Length | 0.000 mm |
| Offset Loss | 0.00 GΩ/s |
| Loss | 0.0000 dB/√GHz |

Environmental data

| | |
|---|------------------|
| Operating temperature range ³ | +20 °C to +26 °C |
| Rated temperature range of use ⁴ | 0 °C to +50 °C |
| Storage temperature range | -40 °C to +85 °C |
| RoHS | 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 | 1 pce in bag |
| Weight | 181 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 | Rev. | Engineering change number | Name | Date |
|----------------|----------|---------------|----------|------|---------------------------|------------------|----------|
| Marcel Panicke | 14.01.16 | Markus Müller | 06.05.20 | e00 | 19-2083 | Marion Striegler | 06.05.20 |

| | | |
|--|---|---------------|
| 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 |
|--|---|---------------|

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Rosenberger:](#)

[P5K30R-MSOS3](#)