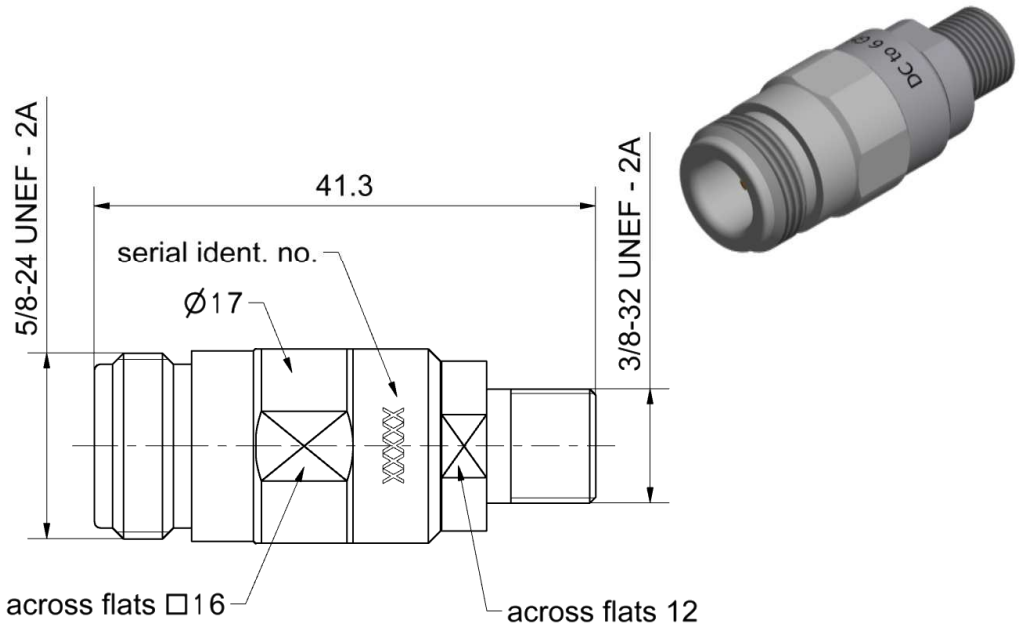
Technical Data Sheet

Rosenberger

Calibration Adaptor
RPC-N 75 Ω Jack – F 75 Ω Jack

P5K174-K21S3



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

Interface

RPC-N 75 Ω according to	IEC 61169-16
F 75 Ω according to	IEC 61169-24[1], EIA-550

[1] *Accepts only limited pin diameter, see "Mechanical data".*

Documents

Application note	AN001 "Calibration Services"

Material and plating

Connector parts	Material	Plating
Center contact	CuBe	Gold, min. 1.27 µm, over nickel
Outer contact	Stainless steel	Passivated
Dielectric	PS	

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

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P5K174-K21S3

Electrical data

Frequency	DC to 6 GHz
Return loss	≥ 32 dB, DC to 3 GHz ≥ 28 dB, 3 GHz to 6 GHz

Mechanical data

	RPC-N 75 Ω	F 75 Ω
Mating cycles	≥ 500	≥ 1000
Maximum torque	1.70 Nm	6.78 Nm
Recommended torque	1.10 Nm	2.00 Nm
Gauge	5.18 mm to 5.26 mm	0.00 mm to 0.10 mm
Permitted male pin diameter[2]		0.76 mm to 0.86 mm

[2] *Connecting a F plug with larger male pin diameter will damage female contact fingers of this adaptor. Use "full range adaptor" 74S121-K22S3 instead.*

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.

Offset Z_o / Impedance / Z_o	75 Ω
Offset Delay	112.745 ps
Length (electrical) / Offset Length	33.80 mm
Offset Loss	3.20 GΩ/s
Loss	0.0209 dB/ $\sqrt{\text{GHz}}$
Line Loss @ 1GHz	0.0006 dB/mm

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 specification are valid.*

[4] *This range is underneath and above the operating temperature range, within the calibration adaptor is fully functional and could be used without damage.*

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Declaration of calibration options

Factory Calibration

Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, **traceable to Rosenberger standards**, national / international standards are not available. Model based standard definitions are reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.

Accredited Calibration

Not available.

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

Calibration interval

Recommendation	12 months

Packing

Standard	1 pce in box
Weight	40.5 g/pce

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