Technical Data Sheet		Rosenberger
RPC-N 50 Ω	Calibration Kit LRL Version	**05CK020-150**

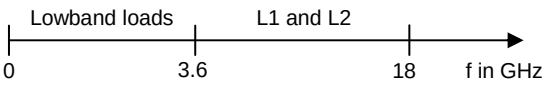
Contents

Device	Part number	Remarks	QTY	Calibration Option[a]
26.4 mm Air line plug/jack	05S101-K026	L1	1	FC
33.3 mm Air line plug/jack	05S101-K033	L2	1	FC
61 mm Air line plug/jack	05S101-K061	L3	1	FC
Short circuit plug	05S12S-000S3	Reflect standard	1	FC
Short circuit jack	05K12S-000S3	Reflect standard	1	FC
Combi wrench	53W011-000	-	1	-
Torque wrench	53W009-000	-	1	FC

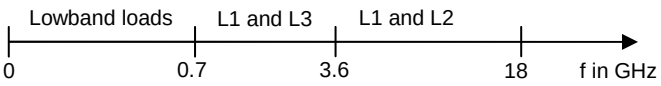
a. See “Declaration of calibration options” for explanation.

LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The following graphs show two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

Frequency Range (2 Bands)



Frequency Range (3 Bands)



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Documentation

This kit is delivered with

- **USB-Stick**
  Standard Definitions as data files for Vector Network Anaylzer Families PNA (Keysight/Agilent) and ZVA (Rohde&Schwarz). Calibration Certificate as PDF-file.
- **Standard Definitions Cards**
  Printed Standard Definitions that can be used on nearly all Vector Network Analyzers.
- **Kit Info Card**
  Handling precautions and information for installing Standard Definitions on a Vector Network Analyzer.
- **Calibration Certificate**
  Details see "Declaration of calibration options"
- **Operating Manual**

Electrical specifications

This specification covers electrical key values for the main items of the calibration kit. Specific datasheets are available for each component among the part number.

Device	Frequency	Parameter	Specification
Shorts[b] (plug and jack)	DC to ≤ 4 GHz > 4 GHz to ≤ 8 GHz > 8 GHz to ≤ 18 GHz	Error from Nominal Phase	≤ 1.2° ≤ 1.5° ≤ 2.5°
Precision air lines[c]	0.3 GHz to ≤ 4 GHz > 4 GHz to ≤ 8 GHz > 8 GHz to ≤ 18 GHz	Return Loss	≥ 40 dB ≥ 38 dB ≥ 35 dB

b. The specifications for the shorts are given as allowed deviation from nominal model as defined in calibration certificate included with your kit.

c. Calculated value without warranty. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the calibration certificate included with your kit for the exact dimensions of your precision air lines.

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Declaration of calibration options

Factory Calibration

Standard delivery for this kit includes a Factory Calibration. The Calibration Certificate issued reports individual mechanical calibration results, traceable to national / international standards. 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

Recommended accessories

- Rosenberger Test Port Adaptor
- Rosenberger Gauge Kit 05GK0KS-010
- Rosenberger VNA Test cable kit and Microwave Cable Assemblies
- Rosenberger Calibration Loads 05S150-C10S3 and 05K150-C10S3

For further, more detailed information please visit our homepage www.rosenberger.com.

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