R&S®ZN-Z5x
Calibration Units
Specifications

ROHDE&SCHWARZ

Data Sheet | V02.00

CONTENTS

Definitions

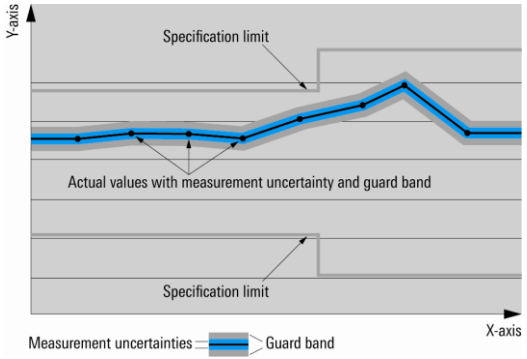
General

Product data applies under the following conditions:

- Three hours storage at ambient temperature followed by 30 minutes warm-up operation
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits

Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as <, ≤, >, ≥, ±, or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Specifications without limits
Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value (e.g. dimensions or resolution of a setting parameter). Compliance is ensured by design.

Typical data (typ.)
Characterizes product performance by means of representative information for the given parameter. When marked with <, > or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)
Characterize product performance by means of a representative value for the given parameter (e.g. nominal impedance). In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)
Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties
Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear.

Device settings and GUI parameters are indicated as follows: “parameter: value”.

Typical data as well as nominal and measured values are not warranted by Rohde & Schwarz.

In line with the 3GPP/3GPP2 standard, chip rates are specified in Mcps (million chips per second), whereas bit rates and symbol rates are specified in Mbps (million bits per second), kbps (thousand bits per second) or ksps (thousand symbols per second), and sample rates are specified in Msample/s (million samples per second). Mcps, kbps, ksps and Msample/s are not SI units.

Specifications

Impedance		50 Ω

Model description R&S®ZN-Z5x

Type	Model	Connector	Number of ports	Frequency range
R&S®ZN-Z50	.30	3.5 mm, female	2	9 kHz to 9 GHz
	.32		2	9 kHz to 26.5 GHz
R&S®ZN-Z51	.32	3.5 mm, female	2	100 kHz to 8.5 GHz
	.34		4	
	.72	type N, female	2	
	.74		4	
R&S®ZN-Z52	.30	3.5 mm, female	4	100 kHz to 26.5 GHz
R&S®ZN-Z53	.32	3.5 mm, female	2	100 kHz to 26.5 GHz
	.72	type N, female	2	100 kHz to 18 GHz
R&S®ZN-Z54	.92	2.92 mm, female	2	9 kHz to 40 GHz
R&S®ZN-Z55	.42	2.4 mm, female	2	9 kHz to 50 GHz

Model description R&S®ZN-Z15x

Type	Model	Connector	Number of ports	Frequency range
R&S®ZN-Z151	.72	type N, female	2	100 kHz to 8.5 GHz
	.32	SMA, female	2	
R&S®ZN-Z152	.36		6	
R&S®ZN-Z153	.34		4	
R&S®ZN-Z154			6 to 24	
R&S®ZN-Z156	.02	1.85 mm, female	2	5 GHz to 67 GHz

Input power limits

Nominal input level range	R&S®ZN-Z50/-Z54/-Z55	–45 dBm to +20 dBm
	R&S®ZN-Z51/-Z52/-Z53	–45 dBm to +20 dBm
	R&S®ZN-Z151/-Z152/-Z153/-Z154	–45 dBm to +10 dBm
	R&S®ZN-Z156	–45 dBm to +10 dBm
Damage level	R&S®ZN-Z50/-Z54/-Z55	+20 dBm
	R&S®ZN-Z51/-Z52/-Z53	+23 dBm
	R&S®ZN-Z151/-Z152/-Z153/-Z154	
	R&S®ZN-Z156	
Damage DC voltage	R&S®ZN-Z50/-Z54/-Z55	0 V
	R&S®ZN-Z51/-Z52/-Z53	12 V
	R&S®ZN-Z151/-Z152/-Z153/-Z154	
	R&S®ZN-Z156	

Effective system data

Effective system data of the R&S®ZN-Z50 (model .30)

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	9 kHz to 100 kHz	> 40 dB	> 42 dB
	100 kHz to 2 GHz	> 44 dB	> 45 dB
	2 GHz to 6 GHz	> 41 dB	> 43 dB
	6 GHz to 9 GHz	> 41 dB	> 43 dB
Source match and load match	9 kHz to 100 kHz	> 36 dB	> 38 dB
	100 kHz to 2 GHz	> 42 dB	> 43 dB
	2 GHz to 6 GHz	> 39 dB	> 40 dB
	6 GHz to 9 GHz	> 38 dB	> 39 dB
Reflection tracking and transmission tracking	9 kHz to 100 kHz	< 0.10 dB	< 0.08 dB
	100 kHz to 2 GHz	< 0.05 dB	< 0.04 dB
	2 GHz to 6 GHz	< 0.07 dB	< 0.06 dB
	6 GHz to 9 GHz	< 0.07 dB	< 0.06 dB

[1] At +23 °C.

Effective system data of the R&S®ZN-Z50 (model .32)

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	9 kHz to 100 kHz	> 40 dB	> 42 dB
	100 kHz to 2 GHz	> 44 dB	> 45 dB
	2 GHz to 6 GHz	> 41 dB	> 43 dB
	6 GHz to 10 GHz	> 41 dB	> 43 dB
	10 GHz to 20 GHz	> 39 dB	> 41 dB
	20 GHz to 26.5 GHz	> 37 dB	> 39 dB
Source match and load match	9 kHz to 100 kHz	> 36 dB	> 38 dB
	100 kHz to 2 GHz	> 42 dB	> 43 dB
	2 GHz to 6 GHz	> 39 dB	> 40 dB
	6 GHz to 10 GHz	> 38 dB	> 39 dB
	10 GHz to 20 GHz	> 36 dB	> 37 dB
	20 GHz to 26.5 GHz	> 34 dB	> 36 dB
Reflection tracking and transmission tracking	9 kHz to 100 kHz	< 0.10 dB	< 0.08 dB
	100 kHz to 2 GHz	< 0.05 dB	< 0.04 dB
	2 GHz to 6 GHz	< 0.07 dB	< 0.06 dB
	6 GHz to 10 GHz	< 0.07 dB	< 0.06 dB
	10 GHz to 20 GHz	< 0.09 dB	< 0.08 dB
	20 GHz to 26.5 GHz	< 0.12 dB	< 0.10 dB

Effective system data of the R&S®ZN-Z51

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [2]	Specification [3]
Directivity	100 kHz to 10 MHz	> 40 dB	42 dB	> 40 dB
	10 MHz to 4 GHz	> 46 dB	46 dB	> 40 dB
	4 GHz to 8.5 GHz	> 40 dB	42 dB	> 36 dB
Source match	100 kHz to 10 MHz	> 34 dB	38 dB	> 34 dB
	10 MHz to 4 GHz	> 40 dB	40 dB	> 36 dB
	4 GHz to 8.5 GHz	> 36 dB	38 dB	> 30 dB
Load match	100 kHz to 10 MHz	> 40 dB	42 dB	> 40 dB
	10 MHz to 4 GHz	> 46 dB	46 dB	> 36 dB
	4 GHz to 8.5 GHz	> 40 dB	42 dB	> 32 dB
Reflection tracking and transmission tracking	100 kHz to 10 MHz	< 0.1 dB	0.08 dB	< 0.1 dB
	10 MHz to 4 GHz	< 0.04 dB	0.04 dB	< 0.06 dB
	4 GHz to 8.5 GHz	< 0.1 dB	0.08 dB	< 0.12 dB

[2] At +23 °C.

[3] With optional port connectors (see port options for the R&S®ZN-Z51 calibration unit on page 23).

Effective system data of the R&S®ZN-Z52

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	100 kHz to 1 MHz	> 40 dB	> 42 dB
	1 MHz to 2 GHz	> 44 dB	> 45 dB
	2 GHz to 6 GHz	> 41 dB	> 43 dB
	6 GHz to 10 GHz	> 41 dB	> 43 dB
	10 GHz to 20 GHz	> 39 dB	> 41 dB
	20 GHz to 26.5 GHz	> 37 dB	> 39 dB
Source match and load match	100 kHz to 1 MHz	> 38 dB	> 40 dB
	1 MHz to 2 GHz	> 42 dB	> 43 dB
	2 GHz to 6 GHz	> 39 dB	> 40 dB
	6 GHz to 10 GHz	> 37 dB	> 38 dB
	10 GHz to 20 GHz	> 35 dB	> 36 dB
	20 GHz to 26.5 GHz	> 33 dB	> 35 dB
Reflection tracking and transmission tracking	100 kHz to 1 MHz	< 0.10 dB	< 0.08 dB
	1 MHz to 2 GHz	< 0.05 dB	< 0.04 dB
	2 GHz to 6 GHz	< 0.07 dB	< 0.06 dB
	6 GHz to 10 GHz	< 0.07 dB	< 0.06 dB
	10 GHz to 20 GHz	< 0.09 dB	< 0.08 dB
	20 GHz to 26.5 GHz	< 0.12 dB	< 0.10 dB

Effective system data of the R&S®ZN-Z53

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	**Frequency range**	**Model .32 (up to 6.5 GHz), 3.5 mm, female**		**Model .72 (up to 18 GHz), type N, female**	
		Specification	**Typical [1]**	**Specification**	**Typical [1]**
Directivity	100 kHz to 1 MHz	> 40 dB	> 42 dB	> 40 dB	> 42 dB
	1 MHz to 2 GHz	> 44 dB	> 45 dB	> 44 dB	> 45 dB
	2 GHz to 6 GHz	> 41 dB	> 43 dB	> 41 dB	> 43 dB
	6 GHz to 10 GHz	> 41 dB	> 43 dB	> 41 dB	> 43 dB
	10 GHz to 20 GHz	> 39 dB	> 41 dB	> 39 dB	> 41 dB
	20 GHz to 26.5 GHz	> 37 dB	> 39 dB	–	–
Source match and load match	100 kHz to 1 MHz	> 38 dB	> 40 dB	> 38 dB	> 40 dB
	1 MHz to 2 GHz	> 42 dB	> 43 dB	> 42 dB	> 43 dB
	2 GHz to 6 GHz	> 39 dB	> 40 dB	> 39 dB	> 40 dB
	6 GHz to 10 GHz	> 37 dB	> 38 dB	> 37 dB	> 38 dB
	10 GHz to 20 GHz	> 35 dB	> 36 dB	> 35 dB	> 36 dB
	20 GHz to 26.5 GHz	> 33 dB	> 35 dB	–	–
Reflection tracking and transmission tracking	100 kHz to 1 MHz	< 0.10 dB	< 0.08 dB	< 0.10 dB	< 0.08 dB
	1 MHz to 2 GHz	< 0.05 dB	< 0.04 dB	< 0.05 dB	< 0.04 dB
	2 GHz to 6 GHz	< 0.07 dB	< 0.06 dB	< 0.07 dB	< 0.06 dB
	6 GHz to 10 GHz	< 0.07 dB	< 0.06 dB	< 0.07 dB	< 0.06 dB
	10 GHz to 20 GHz	< 0.09 dB	< 0.08 dB	< 0.09 dB	< 0.08 dB
	20 GHz to 26.5 GHz	< 0.12 dB	< 0.10 dB	–	–

Effective system data of the R&S®ZN-Z54

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	9 kHz to 100 kHz	> 40 dB	> 41 dB
	100 kHz to 2 GHz	> 44 dB	> 45 dB
	2 GHz to 10 GHz	> 40 dB	> 41 dB
	10 GHz to 20 GHz	> 38 dB	> 40 dB
	20 GHz to 30 GHz	> 36 dB	> 38 dB
	30 GHz to 40 GHz	> 34 dB	> 36 dB
Source match and load match	9 kHz to 100 kHz	> 37 dB	> 39 dB
	100 kHz to 2 GHz	> 41 dB	> 42 dB
	2 GHz to 10 GHz	> 37 dB	> 38 dB
	10 GHz to 20 GHz	> 34 dB	> 35 dB
	20 GHz to 30 GHz	> 32 dB	> 34 dB
	30 GHz to 40 GHz	> 30 dB	> 32 dB
Reflection tracking and transmission tracking	9 kHz to 100 kHz	< 0.10 dB	< 0.08 dB
	100 kHz to 2 GHz	< 0.05 dB	< 0.04 dB
	2 GHz to 10 GHz	< 0.07 dB	< 0.06 dB
	10 GHz to 20 GHz	< 0.09 dB	< 0.08 dB
	20 GHz to 30 GHz	< 0.12 dB	< 0.10 dB
	30 GHz to 40 GHz	< 0.15 dB	< 0.12 dB

Effective system data of the R&S®ZN-Z55

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	9 kHz to 100 kHz	> 40 dB	> 41 dB
	100 kHz to 2 GHz	> 44 dB	> 45 dB
	2 GHz to 10 GHz	> 39 dB	> 41 dB
	10 GHz to 20 GHz	> 37 dB	> 39 dB
	20 GHz to 30 GHz	> 35 dB	> 37 dB
	30 GHz to 40 GHz	> 34 dB	> 36 dB
	40 GHz to 50 GHz	> 32 dB	> 34 dB
Source match and load match	9 kHz to 100 kHz	> 37 dB	> 40 dB
	100 kHz to 2 GHz	> 41 dB	> 42 dB
	2 GHz to 10 GHz	> 36 dB	> 38 dB
	10 GHz to 20 GHz	> 34 dB	> 36 dB
	20 GHz to 30 GHz	> 31 dB	> 33 dB
	30 GHz to 40 GHz	> 30 dB	> 32 dB
	40 GHz to 50 GHz	> 27 dB	> 29 dB
Reflection tracking and transmission tracking	9 kHz to 100 kHz	< 0.10 dB	< 0.08 dB
	100 kHz to 2 GHz	< 0.05 dB	< 0.04 dB
	2 GHz to 10 GHz	< 0.07 dB	< 0.06 dB
	10 GHz to 20 GHz	< 0.09 dB	< 0.08 dB
	20 GHz to 30 GHz	< 0.12 dB	< 0.10 dB
	30 GHz to 40 GHz	< 0.15 dB	< 0.12 dB
	40 GHz to 50 GHz	< 0.20 dB	< 0.14 dB

Effective system data of the R&S®ZN-Z151, R&S®ZN-Z152, R&S®ZN-Z153

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification
Directivity	100 kHz to 10 MHz	> 38 dB
	10 MHz to 4 GHz	> 40 dB
	4 GHz to 8.5 GHz	> 38 dB
Source match and load match	100 kHz to 10 MHz	> 32 dB
	10 MHz to 4 GHz	> 36 dB
	4 GHz to 8.5 GHz	> 32 dB
Reflection tracking and transmission tracking	100 kHz to 10 MHz	< 0.20 dB
	10 MHz to 4 GHz	< 0.10 dB
	4 GHz to 8.5 GHz	< 0.2 dB

Effective system data of the R&S®ZN-Z154

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification
Directivity	100 kHz to 10 MHz	> 38 dB
	10 MHz to 4 GHz	> 40 dB
	4 GHz to 8.5 GHz	> 36 dB
Source match and load match	100 kHz to 10 MHz	> 20 dB
	10 MHz to 4 GHz	> 36 dB
	4 GHz to 8.5 GHz	> 32 dB
Reflection tracking and transmission tracking	100 kHz to 10 MHz	< 0.20 dB
	10 MHz to 4 GHz	< 0.10 dB
	4 GHz to 8.5 GHz	< 0.20 dB

Effective system data of the R&S®ZN-Z156

This data is valid at an ambient temperature between +18 °C and +28 °C, at a measurement bandwidth of 10 Hz, and a nominal power of –10 dBm at the calibration ports.

Effective error coefficient	Frequency range	Specification	Typical [1]
Directivity	5 GHz to 20 GHz	> 36 dB	42 dB
	20 GHz to 40 GHz	> 32 dB	36 dB
	40 GHz to 67 GHz	> 30 dB	34 dB
Source match and load match	5 GHz to 20 GHz	> 34 dB	38 dB
	20 GHz to 40 GHz	> 30 dB	34 dB
	40 GHz to 60 GHz	> 26 dB	32 dB
	40 GHz to 67 GHz	> 26 dB	30 dB
Reflection tracking and transmission tracking	5 GHz to 20 GHz	< 0.10 dB	0.08 dB
	20 GHz to 40 GHz	< 0.15 dB	0.10 dB
	40 GHz to 60 GHz	< 0.20 dB	0.12 dB
	40 GHz to 67 GHz	< 0.20 dB	0.15 dB

General data

Temperature loading	operating temperature range	+5 °C to +40 °C
	permissible temperature range	0 °C to +50 °C
	storage temperature range	–40 °C to +70 °C, in line with IEC 60068-2-1 and IEC 60068-2-2
Damp heat		+40 °C at 85 % rel. humidity
Mechanical resistance	vibration test, sinusoidal	5 Hz to 55 Hz, displacement: 0.15 mm constant amplitude (1.8 g at 55 Hz); 55 Hz to 150 Hz, acceleration: 0.5 g constant, in line with IEC 60068-2-6
	vibration test, random	10 Hz to 300 Hz, acceleration 1.2 g (RMS), in line with IEC 60068-2-64
	shock test	40 g shock spectrum, in line with MIL-STD-810E method no. 516.4, procedure I
Calibration interval		12 months
EMC	RF emission	in line with CISPR 11/EN 55011 group 1 class A (for a shielded test setup); instrument complies with the emission requirements stipulated by EN 55011 and EN 61326-1 class A making the instrument suitable for use in industrial environments
	immunity	in line with EMC Directive EC2014/30/EU, including IEC/EN 61326-1 (immunity test requirement for industrial environment, EN 61326 table 2)

Safety		in line with • IEC 61010-1 • EN 61010-1 • UL 61010-1, CSA C22.2 No. 61010.1
Power supply	R&S®ZN-Z50/-Z51/-Z52/-Z53/-Z54/-Z55 /-Z152/-Z153	via USB, 5 V, 450 mA, max. 500 mA
	R&S®ZN-Z151	via USB, 5 V, 300 mA
	R&S®ZN-Z154	100 V to 240 V (AC) ± 10 %, 50 Hz to 60 Hz/400 Hz ± 5 %, safety class I to VDE 411
	R&S®ZN-Z156	via USB, 5 V, 220 mA
Power consumption	R&S®ZN-Z50/-Z51/-Z52/-Z53/-Z54/-Z55 /-Z152/-Z153	2.3 W
	R&S®ZN-Z151	1.5 W
	R&S®ZN-Z154	≤ 130 VA
	R&S®ZN-Z156	1.1 W

Dimensions and weight

Designation	Dimensions (W × H × D)	Weight	Shipping weight
R&S®ZN-Z5x	118 mm × 35 mm × 125 mm (4.65 in × 1.38 in × 4.92 in)	1 kg (2.2 lb)	3 kg (6.61 lb)
R&S®ZN-Z151 model .72	124 mm × 34 mm × 142 mm (4.88 in × 1.34 in × 5.59 in)	900 g (1.98 lb)	2 kg (4.41 lb)
R&S®ZN-Z151 model .32	124 mm × 37 mm × 112 mm (4.88 in × 1.46 in × 4.41 in)	780 g (1.63 lb)	1.9 kg (4.19 lb)
R&S®ZN-Z152	175 mm × 38 mm × 167 mm (6.89 in × 1.50 in × 6.57 in)	1.4 kg (3.09 lb)	2.5 kg (5.5 lb)
R&S®ZN-Z153	124 mm × 38 mm × 125 mm (4.88 in × 1.50 in × 4.92 in)	790 g (1.74 lb)	2 kg (4.4 lb)
R&S®ZN-Z154	445 mm × 88 mm × 300 mm (17.52 in × 3.46 in × 11.81 in)	5 kg to 7 kg (11 lb to 15.4 lb)	–
R&S®ZN-Z156	51 mm × 28 mm × 134 mm (2.01 in × 1.10 in × 5.28 in)	80 g (0.18 lb)	–

Ordering information

R&S®ZN-Z5x

Designation	Frequency range	Type	Order No.
Calibration Unit, 2 ports, 3.5 mm, female	9 kHz to 9 GHz	R&S®ZN-Z50	1335.6904.30
Calibration Unit, 2 ports, 3.5 mm, female	9 kHz to 26.5 GHz		1335.6904.32
Calibration Unit, 2 ports, 3.5 mm, female	100 kHz to 8.5 GHz	R&S®ZN-Z51	1319.5507.32
Calibration Unit, 2 ports, type N, female			1319.5507.72
Calibration Unit, 4 ports, 3.5 mm, female			1319.5507.34
Calibration Unit, 4 ports, type N, female			1319.5507.74
Calibration Unit, 4 ports, 3.5 mm, female	100 kHz to 26.5 GHz	R&S®ZN-Z52	1335.6997.30
Calibration Unit, 2 ports, 3.5 mm, female	100 kHz to 26.5 GHz	R&S®ZN-Z53	1335.7046.32
Calibration Unit, 2 ports, type N, female	100 kHz to 18 GHz		1335.7046.72
Calibration Unit, 2 ports, 2.92 mm, female	9 kHz to 40 GHz	R&S®ZN-Z54	1335.7117.92
Calibration Unit, 2 ports, 2.4 mm, female	9 kHz to 50 GHz	R&S®ZN-Z55	1335.4181.42

R&S®ZN-Z15x

Designation	Frequency range	Type	Order No.
Calibration Unit, 2 ports, type N, female	100 kHz to 8.5 GHz	R&S®ZN-Z151	1317.9134.72
Calibration Unit, 2 ports, SMA, female			1317.9134.32
Calibration Unit, 6 ports, SMA, female		R&S®ZN-Z152	1319.6003.36
Calibration Unit, 4 ports, SMA, female		R&S®ZN-Z153	1319.6178.34
Calibration Unit, 6 ports, SMA, female	10 MHz to 8.5 GHz	R&S®ZN-Z154	1319.5120.02
Additional Ports 7 to 12 for R&S®ZN-Z154		R&S®ZN-Z154-B22	1319.5136.22
Additional Ports 13 to 18 for R&S®ZN-Z154		R&S®ZN-Z154-B32	1319.5136.32
Additional Ports 19 to 24 for R&S®ZN-Z154		R&S®ZN-Z154-B42	1319.5136.42
Calibration Unit, 2 ports, 1.85 mm, female	5 GHz to 67 GHz	R&S®ZN-Z156	1332.7239.02

Port options for the R&S®ZN-Z51 calibration unit

Designation		Type	Order No.
Connector Port 1	3.5 mm, female [4]	R&S®ZNZ51-B130	1319.5720.11
Connector Port 2		R&S®ZNZ51-B230	1319.5720.12
Connector Port 3		R&S®ZNZ51-B330	1319.5720.13
Connector Port 4		R&S®ZNZ51-B430	1319.5720.14
Connector Port 1	3.5 mm, male [4]	R&S®ZNZ51-B131	1319.5736.11
Connector Port 2		R&S®ZNZ51-B231	1319.5736.12
Connector Port 3		R&S®ZNZ51-B331	1319.5736.13
Connector Port 4		R&S®ZNZ51-B431	1319.5736.14
Connector Port 1	type N, male [4]	R&S®ZNZ51-B171	1319.5713.11
Connector Port 2		R&S®ZNZ51-B271	1319.5713.12
Connector Port 3		R&S®ZNZ51-B371	1319.5713.13
Connector Port 4		R&S®ZNZ51-B471	1319.5713.14
Connector Port 1	7/16, female [4]	R&S®ZNZ51-B160	1319.5742.11
Connector Port 2		R&S®ZNZ51-B260	1319.5742.12
Connector Port 3		R&S®ZNZ51-B360	1319.5742.13
Connector Port 4		R&S®ZNZ51-B460	1319.5742.14
Connector Port 1	7/16, male [4]	R&S®ZNZ51-B161	1319.5759.11
Connector Port 2		R&S®ZNZ51-B261	1319.5759.12
Connector Port 3		R&S®ZNZ51-B361	1319.5759.13
Connector Port 4		R&S®ZNZ51-B461	1319.5759.14

[4] Adapters are only available for the .72/.74 models. Only one option per port is possible as the adapters are not removable to assure accurate calibration results. The upper frequency limit of the ports with 7 /16 adapters is limited to 7.5 GHz.

Accredited calibration

Accredited calibration		Type	Order No.
DAKKS calibration for	R&S®ZN-Z50	R&S®ZNZ50-ACA	1337.6076.02
	R&S®ZN-Z51	R&S®ZNZ4-DAKKS	1319.5765.74
	R&S®ZN-Z52	R&S®ZNZ52-ACA	1337.6082.02
	R&S®ZN-Z53	R&S®ZNZ53-ACA	1337.6099.02
	R&S®ZN-Z54	R&S®ZNZ54-ACA	1337.6101.02
	R&S®ZN-Z55	R&S®ZNZ55-ACA	1337.6118.02
	R&S®ZN-Z151	R&S®ZNZ2-DAKKS	1319.4469.72
	R&S®ZN-Z152	R&S®ZNZ152-ACA	1319.6149.36
	R&S®ZN-Z153	R&S®ZNZ153-ACA	1319.6149.34
	R&S®ZN-Z154	R&S®ZNZ154-ACA	1319.6155.02

Service options

Service options		
Extended Warranty, one year	R&S®WE1	Please contact your local Rohde & Schwarz sales office.
Extended Warranty, two years	R&S®WE2	
Extended Warranty, three years	R&S®WE3	
Extended Warranty, four years	R&S®WE4	
Extended Warranty with Calibration Coverage, one year	R&S®CW1	
Extended Warranty with Calibration Coverage, two years	R&S®CW2	
Extended Warranty with Calibration Coverage, three years	R&S®CW3	
Extended Warranty with Calibration Coverage, four years	R&S®CW4	

Extended warranty with a term of one to four years (WE1 to WE4)
Repairs carried out during the contract term are free of charge [5]. Necessary calibration and adjustments carried out during repairs are also covered. Simply contact the forwarding agent we name; your product will be picked up free of charge and returned to you in top condition a couple of days later.

Extended warranty with calibration (CW1 to CW4)
Enhance your extended warranty by adding calibration coverage at a package price. This package ensures that your Rohde & Schwarz product is regularly calibrated, inspected and maintained during the term of the contract. It includes all repairs [6] and calibration at the recommended intervals as well as any calibration carried out during repairs or option upgrades.

[5] Excluding defects caused by incorrect operation or handling and force majeure. Wear-and-tear parts are not included.

Service that adds value

- Worldwide
- Local and personalized
- Customized and flexible
- Uncompromising quality
- Long-term dependability

Sustainable product design

- Environmental compatibility and eco-footprint
- Energy efficiency and low emissions
- Longevity and optimized total cost of ownership

Certified Quality Management
ISO 9001

Certified Environmental Management
ISO 14001

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