R&S®CMW-Z10
RF SHIELD BOX

Specifications

Specifications
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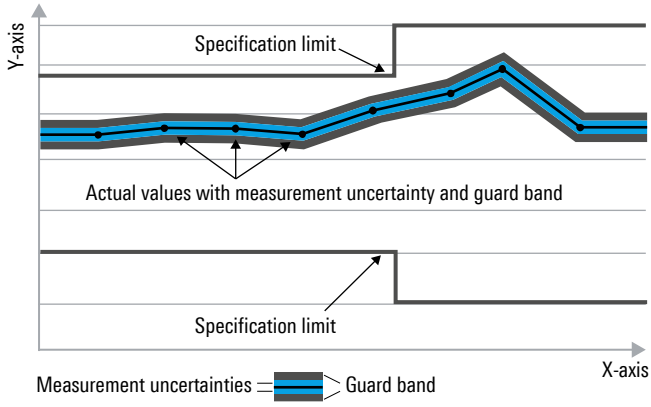
CONTENTS

Definitions

General
Product data applies under the following conditions:

- Three hours of storage at ambient temperature followed by 30 minutes of 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 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.

Base unit

R&S®CMW-Z10 RF shield box

Scope of delivery: RF shield box, 1 m RF cable with N connectors for frequencies up to 3 GHz

Shielding effectiveness [1]	0.4 GHz to 4 GHz	> 55 dB (meas.)
	4 GHz to 6 GHz	> 45 dB (meas.)
	6 GHz to 8 GHz	> 35 dB (meas.)

General data

Dimensions		
Outer dimensions	W × H × D	320.9 mm × 267.5 mm × 527.7 mm (12.6 in × 10.5 in × 20.8 in)
Inner dimensions	W × H × D	239 mm × 157 mm × 371 mm (9.4 in × 6.2 in × 14.6 in)
Weight		9 kg (19.8 lb)

R&S®CMW-Z11 antenna coupler (mandatory selection)

Scope of delivery: antenna coupler, PE bracket and stabilizing piece and spacers for secure repeatable positioning of DUTs

VSWR	VSWR without DUT, with R&S®CMW-Z110, R&S®CMW-Z10 open	
	0.4 GHz to 1.4 GHz	< 3.5
	1.4 GHz to 3.5 GHz	< 2
	3.5 GHz to 8 GHz	< 3.5
Maximum power ratings	from DUT	+37 dBm
	from R&S®CMW	+33 dBm
Polarization		circular
Connector		N female

Options

R&S®CMW-Z12 D-Sub feedthrough (var. 02)

Power pins 14 to 18	maximum current rating, per pin	1 A
	maximum rated voltage	15 V
	cut-off frequency	1 kHz
Data pins 1 to 13 and 19 to 25	maximum current rating	50 mA
	maximum rated voltage	15 V
	maximum pass frequency	5 MHz
	filter shunt capacitance	< 800 pF

R&S®CMW-Z12 D-Sub feedthrough, extended DC power pin connectors (var. 04)

Power pins 12 to 18, 24, 25	maximum current rating, per pin	1 A
	maximum rated voltage	15 V
	cut-off frequency	1 kHz
Data pins 1 to 11 and 19 to 23	maximum current rating	50 mA
	maximum rated voltage	15 V
	maximum pass frequency	5 MHz
	filter shunt capacitance	< 800 pF

[1] Measurement in line with IEEE 299.

R&S®CMW-Z13 USB 2.0 feedthrough

Connector inside antenna coupler		USB-A
Connector outside antenna coupler		USB-B
Power supply	maximum current rating	0.5 A
	rated voltage	5 V
Data rate [2]		low speed
		full speed
		USB 2.0 high speed

R&S®CMW-Z14 RF feedthrough

Connector inside antenna coupler		2 × N female
Connector outside antenna coupler		2 × N female
Impedance		50 Ω
Frequency range		0 Hz to 8 GHz

R&S®CMW-Z16 second antenna element for diversity/MIMO measurements

(requires R&S®CMW-Z14)

VSWR	VSWR without DUT, with R&S®CMW-Z110, R&S®CMW-Z10 open	
	0.45 GHz to 1.4 GHz	< 3.5
	1.4 GHz to 3.5 GHz	< 2.3
	3.5 GHz to 8 GHz	< 3.5
Maximum power ratings	from DUT	+37 dBm
	from R&S®CMW	+33 dBm
Polarization		circular
Connector		N female with N feedthrough

R&S®CMW-Z18 Ethernet feedthrough

Connector		RJ-45 (female – female)
Speed class		1000BASE-T
Power over Ethernet (PoE)		not supported

R&S®CMW-Z110 RF cable up to 18 GHz

Connectors		N
Recommendation		high shielding effectiveness due to copper foil and copper braid shield, recommended for operation from 3 GHz to 18 GHz

R&S®CMW-Z120 additional handle

Recommendation		additional rotary handle to facilitate opening and closing of the shield box

[2] Assured data integrity when using a certified high speed USB cable.

Ordering information

Designation	Type	Order No.
Base unit		
RF shield box, internal gas springs, assembled	R&S®CMW-Z10	1204.7008.02
RF shield box, external gas springs, assembled	R&S®CMW-Z10	1204.7008.04
Antenna coupler, up to 6 GHz (mandatory selection)	R&S®CMW-Z11	1204.7108.02
Options		
D-Sub feedthrough	R&S®CMW-Z12	1204.7208.02
D-Sub feedthrough, extended DC power pin connector	R&S®CMW-Z12	1204.7208.04
USB 2.0 feedthrough	R&S®CMW-Z13	1204.7308.04
RF feedthrough	R&S®CMW-Z14	1204.7408.02
Second antenna element for diversity/MIMO measurements (requires R&S®CMW-Z14)	R&S®CMW-Z16	1204.7808.02
Ethernet feedthrough	R&S®CMW-Z18	1204.7050.02
RF cable, up to 6 GHz	R&S®CMW-Z110	1204.7608.02
Additional handle, rotatable	R&S®CMW-Z120	1204.7708.02

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