

R&S®ZNA

VECTOR NETWORK ANALYZER

Specifications

Addendum to the "Options" section of the R&S®ZNA specifications (PD 5215.4652.22):

R&S®ZNA26-B10 Metrology Configuration

R&S®ZNA43-B10 Metrology Configuration

R&S®ZNA50-B10 Metrology Configuration

R&S®ZNA67-B10 Metrology Configuration

Specifications
Version 03.00

ROHDE & SCHWARZ

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R&S®ZNA26-B10, R&S®ZNA43-B10, R&S®ZNA50-B10, R&S®ZNA67-B10 metrology configuration

Metrology configuration gives superior measurement stability, e.g. for high precision reflection coefficient measurements. It cannot be combined with any other additional hardware option.

Uncorrected system data

The data below is valid between +18 °C and +28 °C.

It is based on a source power of –10 dBm and a measurement bandwidth of 1 kHz.

		spec.	typ.	meas.
Directivity in dB	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67			
	10 MHz to 20 MHz	> 8 dB		
	20 MHz to 20 GHz	> 10 dB		
	20 GHz to 35 GHz	> 8 dB		
	35 GHz to 40 GHz	> 6 dB		
	R&S®ZNA43, 2.4 mm interface			
	40 GHz to 43.5 GHz	> 5 dB		
	R&S®ZNA43, 2.92 mm interface			
	40 GHz to 43.5 GHz			6 dB
	R&S®ZNA50 and R&S®ZNA67			
	40 GHz to 50 GHz	> 5 dB		
	50 GHz to 67 GHz	> 3 dB		
Source match in dB	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67			
	10 MHz to 20 GHz	> 10 dB		
	20 GHz to 35 GHz	> 8 dB		
	35 GHz to 40 GHz	> 6 dB		
	R&S®ZNA43, 2.4 mm interface			
	40 GHz to 43.5 GHz	> 6 dB		
	R&S®ZNA43, 2.92 mm interface			
	40 GHz to 43.5 GHz			10 dB
	R&S®ZNA50 and R&S®ZNA67			
	40 GHz to 50 GHz	> 6 dB		
	50 GHz to 67 GHz	> 4 dB		
	Reflection tracking in dB	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67		
10 MHz to 10 GHz		< 1.5 dB		
10 GHz to 26.5 GHz		< 2 dB		
26.5 GHz to 40 GHz		< 2.5 dB		
R&S®ZNA43, 2.4 mm interface				
40 GHz to 43.5 GHz		< 3 dB		
R&S®ZNA43, 2.92 mm interface				
40 GHz to 43.5 GHz				3 dB
R&S®ZNA50 and R&S®ZNA67				
40 GHz to 50 GHz		< 3 dB		
R&S®ZNA67				
50 GHz to 67 GHz		< 3.5 dB		
Transmission tracking in dB	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67			
	10 MHz to 10 GHz	< 1.5 dB		
	10 GHz to 26.5 GHz	< 2 dB		
	26.5 GHz to 40 GHz	< 2.5 dB		
	R&S®ZNA43, 2.4 mm interface			
	40 GHz to 43.5 GHz	< 3 dB		
	R&S®ZNA43, 2.92 mm interface			
	40 GHz to 43.5 GHz			3 dB
	R&S®ZNA50 and R&S®ZNA67			
	40 GHz to 50 GHz	< 3 dB		
	R&S®ZNA67			
	50 GHz to 67 GHz	< 3.5 dB		

	spec.	typ.	meas.
Load match in dB	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67		
	10 MHz to 20 GHz	> 10 dB	
	R&S®ZNA26, R&S®ZNA43 and R&S®ZNA67		
	20 GHz to 40 GHz	> 8 dB	
	R&S®ZNA50		
	20 GHz to 40 GHz	> 8 dB	
	R&S®ZNA43, 2.4 mm interface		
	40 GHz to 43.5 GHz	> 8 dB	
	R&S®ZNA43, 2.92 mm interface		
40 GHz to 43.5 GHz			8 dB
R&S®ZNA50 and R&S®ZNA67			
40 GHz to 67 GHz	> 8 dB		

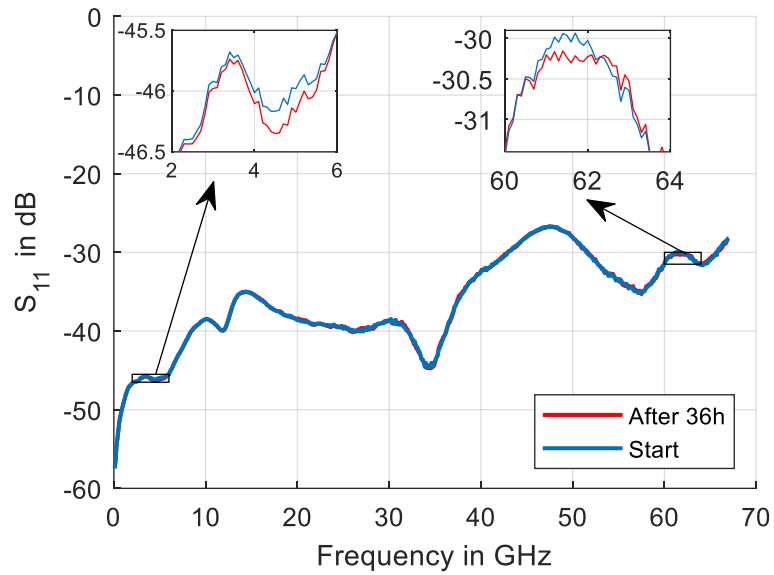
Test port input

	spec.	typ.	meas.
Linearity at test port input, –50 dBm to +8 dBm input level, referenced to –20 dBm, specified at 1 GHz	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67		
	+8 dBm	< 0.100 dB	
	+5 dBm	< 0.100 dB	
	0 dBm	< 0.050 dB	
	–5 dBm	< 0.040 dB	
	–10 dBm	< 0.025 dB	
	–15 dBm	< 0.015 dB	
	–20 dBm	< 0.010 dB	
	–25 dBm	< 0.015 dB	
	–30 dBm	< 0.020 dB	
	–35 dBm	< 0.025 dB	
	–40 dBm	< 0.030 dB	
	–45 dBm	< 0.035 dB	
	–50 dBm	< 0.040 dB	

Standard configuration	Base unit and R&S®ZNAxx-B10			
	spec.	typ.	meas.	
Noise level ¹ at 1 kHz measurement bandwidth, normalized to 1 Hz	R&S®ZNA26, R&S®ZNA43, R&S®ZNA50 and R&S®ZNA67			
	10 MHz to 30 MHz	< –78 dBm		
	30 MHz to 100 MHz	< –95 dBm		
	100 MHz to 500 MHz	< –110 dBm		
	500 MHz to 30 GHz	< –123 dBm		
	30 GHz to 40 GHz	< –118 dBm		
	R&S®ZNA43, 2.4 mm interface			
	40 GHz to 43.5 GHz	< –108 dBm		
	R&S®ZNA43, 2.92 mm interface			
	40 GHz to 43.5 GHz			–108 dBm
	R&S®ZNA50 and R&S®ZNA67			
	40 GHz to 50 GHz	< –108 dBm		
50 GHz to 67 GHz	< –100 dBm			

¹ The noise level is defined as the RMS value of the specified noise floor. For different bandwidth add $[10 \times \log_{10}(\text{bandwidth} / 1 \text{ Hz})]$ to the given noise level.

Stability



*Typical longterm match stability of a load measured using R&S®ZNA67, R&S®ZNA67-B10 and R&S®ZN-Z218 calibration kit directly after calibration (blue) and after 36 h (red) in a **non-temperature** controlled environment*

Ordering information

Designation	Type	Order No.
Metrology configuration, 2 ports, 26.5 GHz, 3.5 mm connectors	R&S®ZNA26-B10	1332.4698.22
Metrology configuration, 4 ports, 26.5 GHz, 3.5 mm connectors	R&S®ZNA26-B10	1332.4698.24
Metrology configuration, 2 ports, 43.5 GHz, 2.92 mm connectors	R&S®ZNA43-B10	1332.4698.42
Metrology configuration, 4 ports, 43.5 GHz, 2.92 mm connectors	R&S®ZNA43-B10	1332.4698.44
Metrology configuration, 2 ports, 43.5 GHz, 2.4 mm connectors	R&S®ZNA43-B10	1332.4698.43
Metrology configuration, 4 ports, 43.5 GHz, 2.4 mm connectors	R&S®ZNA43-B10	1332.4698.45
Metrology configuration, 2 ports, 50 GHz, 2.4 mm connectors	R&S®ZNA50-B10	1332.4698.52
Metrology configuration, 4 ports, 50 GHz, 2.4 mm connectors	R&S®ZNA50-B10	1332.4698.54
Metrology configuration, 2 ports, 67 GHz, 1.85 mm connectors	R&S®ZNA67-B10	1332.4698.62
Metrology configuration, 4 ports, 67 GHz, 1.85 mm connectors	R&S®ZNA67-B10	1332.4698.64

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