ROHDE & SCHWARZ

ZVB8

The Rohde & Schwarz ZVB8 is a high-performance Vector Network Analyzer (VNA) belonging to the R&S ZVB family, designed for universal measurements on passive and active components. Featuring a frequency range from 300 kHz to 8 GHz, it is optimized for multiport measurements and balanced devices. With an integrated Windows-based user interface, high measurement speeds, and versatile connectivity, the ZVB8 is ideal for both research and development and high-volume production environments.

SPECIFICATIONS

General

Interfaces	LAN, GPIB (IEC/IEEE bus), USB, Digital I/O (user control)
Display	10.4-inch color TFT display

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 60 Hz
Operating Temperature	+5 °C to +40 °C °C
Dimensions (W×H×D)	440 mm × 230 mm × 350 mm mm
Weight	< 20 kg

Frequency

Frequency Range	300 kHz to 8 GHz
Frequency Resolution	1 Hz

Port Characteristics

Number of Test Ports	2 or 4 (hardware configuration dependent)
Test Port Impedance	50 Ω
Test Port Connector Type	N-type, female

Receiver & Dynamic Range

Dynamic Range	> 120 dB (typical > 130 dB at 10 Hz measurement bandwidth)
Measurement Bandwidths	1 Hz to 500 kHz (in 1/2/5 steps)
Number of Measurement Points	1 to 20001 per trace

Power & Accuracy

Output Power Range	-110 dBm to +10 dBm (typical +13 dBm)

System & Interface

Operating System	Windows-based
External VGA Port	15-pin D-Sub

Measurement Performance

Measurement Time per Point	< 8 µs (at 500 kHz IF bandwidth)
IF Bandwidth Range	1 Hz to 500 kHz
Maximum Input Level	+20 dBm RF power, 30 V DC
Harmonic Distortion	<-30 dBc (at 0 dBm output level)
Trace Noise	< 0.005 dB RMS (at 10 kHz IF bandwidth)

Data Transfer

GPIB Data Transfer Time	< 2.9 ms (for 201 points)
LAN Data Transfer Time	< 1 ms (for 201 points)

Source Specifications

Output Power Resolution	0.01 dB

Inputs & Outputs

USB Interface	4 × USB 2.0 (2 on front panel, 2 on rear panel)
External Keyboard/Mouse Ports	2 × PS/2 connectors on rear panel
Reference Input Connector	BNC, 10 MHz
Reference Output Connector	BNC, 10 MHz

Performance

Reference Frequency Aging	±1 × 10^-6 per year
Reference Frequency Temperature Drift	±1 × 10^-6 (within +5 °C to +40 °C)

TECHNOLOGY

Vector Network Analysis

APPLICATIONS

Multiport and balanced RF component testing, development, and production