

ROHDE & SCHWARZ

ZVRE

The Rohde & Schwarz ZVRE is a high-performance vector network analyzer from the ZV family, designed for precise RF measurements. Offering a frequency range of 10 Hz to 4 GHz, the ZVRE is characterized by its exceptionally high dynamic range, fast sweep rates, and low noise floor. It features an integrated PC controller running Windows NT, providing a versatile platform for automated test and laboratory environments.

SPECIFICATIONS

General

Interfaces	IEC/IEEE bus (GPIB)
Display	Color TFT LCD

Physical

Power Supply	90 V to 260 V AC, 47 Hz to 440 Hz, approx. 320 W
Operating Temperature	+5 °C to +45 °C °C
Dimensions (W×H×D)	435 mm × 281 mm × 580 mm mm
Weight	27 kg

Frequency & Stimulus

Frequency Range	20 kHz to 4 GHz
Frequency Resolution	10 µHz
Number of Test Ports	2
Test Port Impedance	50 Ω

Receiver & Dynamic Range

System Dynamic Range	> 130 dB (IF bandwidth 10 Hz)
Receiver Noise Floor	< -130 dBm (measurement bandwidth 10 Hz)

Measurement Speed & Settings

Measurement Time per Point (Normalized)	< 125 µs
Measurement Time per Point (Fully Calibrated)	< 240 µs
Data Transfer Time (IEC/IEEE bus)	< 15 ms (for 200 points)
Sweep Rate	>> 25 sweeps/s (200 points)

Measurement Capabilities & Calibration

S-Parameter Measurements	Bidirectional (S11, S21, S12, S22)
Manual Calibration Methods	TOM, TRM, TRL, TNA, TOM-X, TOSM
Automatic Calibration Support	AutoKal

Hardware Interfaces & Connections

Test Port Connector Type	N female
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System, Controller & Storage

Operating System	Windows NT
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Environmental

Storage Temperature Range	-40 °C to +70 °C
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Source

Standard Output Power Range	-50 dBm to +10 dBm
Extended Output Power Range (with option)	-115 dBm to +10 dBm
Output Power Resolution	0.1 dB

Receiver

Maximum Safe RF Input Power	+20 dBm
Maximum Safe DC Input Voltage	30 V

Sweep

Number of Measurement Points per Sweep	1 to 2001
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Receiver & IF Bandwidth

IF Bandwidth Range	1 Hz to 10 kHz
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Display & Channels

Number of Channels	4
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Frequency

Reference Frequency	10 MHz
Reference Frequency Aging	< 1 x 10 ⁻⁶ per year

Spectral Purity

Harmonics (at 0 dBm)	<-30 dBc
Non-Harmonics (at 0 dBm)	<-35 dBc

Measurement & Display

Display Formats	dB Mag, Phase, SWR, Smith Chart, Polar, Group Delay, Linear Mag, Real, Imaginary
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Inputs & Outputs

External Reference Input Connector	BNC female (Rear panel, 10 MHz)
External Reference Output Connector	BNC female (Rear panel, 10 MHz)
Trigger Input Connector	BNC female (Rear panel)
Keyboard Connector	5-pin DIN (Front panel)
VGA Output	15-pin D-Sub

Frequency Reference Options

Option ZVR-B4 OCXO Aging	< 1 x 10 ⁻⁹ per day
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Measurement Options

Option ZVR-B2	Time Domain Measurement
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Hardware Options

Option ZVRE-B1	Port 1 RF Attenuator (0 dB to 70 dB in 10 dB steps)
Option ZVRE-B2	Port 2 RF Attenuator (0 dB to 70 dB in 10 dB steps)

TECHNOLOGY

Vector Network Analysis

APPLICATIONS

RF component testing, S-parameter characterization, filter and antenna measurements

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.