ROHDE & SCHWARZ

ZVA24

The Rohde & Schwarz ZVA24 is a high-end vector network analyzer (VNA) offering a frequency range of 10 MHz to 24 GHz. Available in 2-port and 4-port configurations, it utilizes a sophisticated multi-port architecture with dedicated reference and measurement receivers for each port. Designed for demanding laboratory and production applications, the ZVA24 features high measurement speed, extensive calibration methods, and options for advanced tasks such as pulsed profile and true differential measurements.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), LAN, USB
Display	Color LCD
Warm-up Time	30 minutes

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 60 Hz
Operating Temperature	+5 °C to +40 °C °C

General Specifications

Frequency Range	10 MHz to 24 GHz
Number of Test Ports	2 or 4 (configuration dependent)
Test Port Impedance	50 Ω
Test Port Connector Type	3.5 mm (male)
System Architecture (Receivers per Port)	1 measurement receiver and 1 reference receiver per port

Measurement Capabilities & Features

Supported S-Parameters	S11, S12, S21, S22 (up to S44 for 4-port configuration)
Derived Parameters	Impedance (Z), Admittance (Y), Stability, VSWR
Pulsed RF Measurements	Supported (Option dependent)
True Differential Measurements	Supported (Option dependent)

Data Processing & Calibration

Data Points per Trace	2 to 60,001
Calibration Methods Supported	TOSM, UOSM, TOM, TRM, TRL, TNA
Sweep Types	Linear, Logarithmic, Segmented, Power, CW Time
Operating System	Windows

Frequency

Frequency Resolution	1 Hz

Signal Source

Output Power Setting Resolution	0.01 dB

Frequency Reference

Internal Reference Frequency	10 MHz

Test Ports

Maximum Input Power (Damage Level)	+27 dBm
Maximum DC Input Voltage (Damage Level)	30 V

Performance

Measurement Time per Point	< 3.5 µs (CW mode, 1 MHz IF bandwidth)

Connectivity & Options

Direct Generator/Receiver Access	Supported via optional front panel jumpers (ZVA-B16)

Environmental

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

Compliance

Safety Compliance	IEC/EN 61010-1
EMC Compliance	IEC/EN 61326-1 / IEC/EN 61326-2-1

System Architecture

Number of Internal Sources	1 (in 2-port configurations) / 2 (in 4-port configurations)

Capabilities

Measured Quantities	S-parameters, wave quantities, wave quantity ratios, impedance, admittance

Software & Options

Time Domain Analysis	Optional (requires R&S ZVA-K2)
Scalar Mixer Measurements	Optional (requires R&S ZVA-K4)
Vector Mixer Measurements	Optional (requires R&S ZVA-K5)
Noise Figure Measurements	Optional (requires R&S ZVA-K30)

TECHNOLOGY

Vector Network Analysis

APPLICATIONS

RF & Microwave Component Testing