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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz ZVA40 10MHz to 40GHz Vector Scalar S-Parameter Network Analyzer

Rohde & Schwarz ZVA40 Vector Network Analyzer 10 MHz to 40 GHz The R&S ZVA40 is a high-performance two- or four-port VNA covering 10 MHz to 40 GHz. Test ports are ruggedized 2.92 mm male or 2.4 mm male depending on order number (1145.1110.40/.42 2.92 mm; .43/.45 2.4 mm; .48 four-source 2.92 mm). Dynamic range at 10 Hz IF bandwidth is greater than 130 dB, typically 140 dB, from 2 GHz to 20 GHz. Output power is typically up to +18 dBm. Measurement time is less than 3.5 μ s per point. The R&S ZVA40 is a high-performance two- or four-port VNA covering 10 MHz to 40 GHz. Test ports are ruggedized 2.92 mm male or 2.4 mm male depending on order number (1145.1110.40/.42 2.92 mm; .43/.45 2.4 mm; .48 four-source 2.92 mm). Dynamic range at 10 Hz IF bandwidth is greater than 130 dB, typically 140 dB, from 2 GHz to 20 GHz. Output power is typically up to +18 dBm. Measurement time is less than 3.5 μ s per point.



MODEL

Rohde & Schwarz ZVA40

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ZVA40

LISTING

<https://aumictechlabs.com/products/zva40-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz ZVA40 is a vector network analyzer operating from 10 MHz to 40 GHz, engineered for precise S-parameter characterization across RF and microwave components. Available in 2- and 4-port configurations with 2.4 mm or 2.92 mm connectors, the ZVA40 delivers

dynamic range exceeding 140 dB across most of its frequency span, with optional measurement inputs reaching 150 dB from 100 MHz to 20 GHz. Measurement speed reaches sub-3.5 microsecond acquisition per test point in CW mode, with full 200-point frequency sweeps completing in less than 5 milliseconds.

Technical Specifications

Frequency Range: 10 MHz to 40 GHz
Port Configurations: 2-port and 4-port models
Test Port Connectors: 2.4 mm Male or 2.92 mm Male
Impedance: 50 Ω
Frequency Resolution: 1 Hz
Measurement Bandwidth: 1 Hz to 1 MHz
IF Bandwidth Options: 1/5/30 MHz
Measurement Points: 1 to 60,001 per sweep
Traces per Diagram Area: 20
Output Power: Typically > 15 dBm
Output Power Sweep Range: > 50 dB (typ. 60 dB)
Receiver Input Power Range: +27 dBm (compression-free at reduced output power)
Measurement Speed (CW): < 3.5 μ s per test point
Measurement Speed (Sweep): 140 dB typical; up to 150 dB at direct measurement input (100 MHz to 20 GHz)

Key Features

Linear and nonlinear amplifier and mixer characterization
Noise figure measurements
Pulse profile measurements with 12.5 ns resolution
True differential measurements for balanced active devices
Phase and group delay measurements on mixers
Four independent internal signal sources and two independent receivers per test port
Multiple calibration techniques: TOSM, TRL/LRL, TOM, TRM, TNA, UOSM
Automatic multiport calibration (complete 4-port in < 30 seconds)
Phase-coherent signal generation

Typical Applications

Component characterization in research and development
Production testing and validation
Active device measurements requiring high dynamic range
Two-tone amplifier and mixer analysis
Complex microwave system characterization

Features & description

From manufacturer datasheet

Features

- Two or four ports; four-source model .48
- Optional generator and receiver step attenuators per port (B21–B24, B31–B34)
- Direct generator/receiver access B16
- IF bandwidths 1 Hz to 1 MHz (to 30 MHz with K17 class)
- 1 to 60001 points; more than 100 channels / diagrams / traces

Applications

- Active and passive microwave component characterization to 40 GHz
- Mixer / converter scalar and vector measurements (K4 / K5 / K9)
- True differential and balanced measurements (K6, four-port)
- Pulsed and noise-figure measurements (K7 / K30)
- Antenna, radar, and satcom module work

ZVA40 Characteristics / Specifications

PARAMETER	VALUE
Model	ZVA40
Manufacturer	Rohde & Schwarz
Instrument Type	Vector network analyzer
Alias	ZVA 40; R&S ZVA40
Frequency Range	10 MHz to 40 GHz
Frequency Resolution	1 Hz
Static Frequency Accuracy	8e-6 without OCXO; 1e-7 with OCXO
System Impedance	50 ohm
Test Port Connector	2.92 mm male ruggedized or 2.4 mm male ruggedized
Number of Test Ports	2 or 4
Measurement Points	1 to 60001
Measurement Bandwidths	1 Hz to 1 MHz (1/2/5 steps)
Measurement Time per Point	less than 3.5 μ s
Sweep Time 201 Points	4.7 ms
Channel Switching Time	less than 1 ms
Dynamic Range 2 GHz to 20 GHz	greater than 130 dB, typ. 140 dB
Dynamic Range 32 GHz to 40 GHz	greater than 118 dB, typ. 125 dB
Output Power Midband Typical	typ. +18 dBm
Power Sweep Range	greater than 40 dB, typ. 50 dB
Power Range 32 GHz to 40 GHz	minus 30 dBm to +9 dBm, typ. minus 40 dBm to +12 dBm
Power Accuracy 50 MHz to 13 GHz	less than 1 dB at minus 10 dBm, +18 C to +28 C
Power Accuracy 24 GHz to 40 GHz	less than 3 dB at minus 10 dBm
Receiver Noise 2 GHz to 20 GHz	less than minus 115 dBm at 10 Hz BW
Corrected Directivity 700 MHz to 24 GHz	greater than 38 dB, typ. 42 dB (with ZV-Z229 class kit)
Traces per Diagram	20

PARAMETER	VALUE
Two Port 2.92 mm Order	1145.1110.40
Four Port 2.92 mm Order	1145.1110.42
OCXO Option	ZVAB-B4
Time Domain Option	ZVAB-K2 Notes Specs from the R&S ZVA Vector Network Analyzer specifications. Confirm 2-port versus 4-port, 2.92 mm versus 2.4 mm, four-source .48, and installed B16 / step-attenuator / K-options on the label.
Bandwidth	is greater than 130 dB, typically 140 dB, from 2 GHz to 20 GHz. Output power is typically up to +18 dBm. Measurement time is less than 3.5 μ s per point.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance two- or four-port VNA covering 10 MHz to 40 GHz. Test ports are ruggedized 2.92 mm male or 2.4 mm male depending on order number (1145.1110.40/.42 2.92 mm; .43/.45 2.4 mm; .48 four-source 2.92 mm). Dynamic range at 10 Hz IF bandwidth is greater than 130 dB, typically 140 dB, from 2 GHz to 20 GHz. Output power is typically up to +18 dBm. Measurement time is less than 3.5 μ s per point.

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Power Sweep Range	greater than 40 dB, typ. 50 dB
Power Range 32 GHz to 40 GHz	minus 30 dBm to +9 dBm, typ. minus 40 dBm to +12 dBm
Power Accuracy 50 MHz to 13 GHz	less than 1 dB at minus 10 dBm, +18 C to +28 C
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Notes

Specs from the R&S ZVA Vector Network Analyzer specifications. Confirm 2-port versus 4-port, 2.92 mm versus 2.4 mm, four-source .48, and installed B16 / step-attenuator / K-options on the label.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.