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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde and Schwarz ZV-Z51/3.5mm Automatic Calibration Unit, 2-port

The Rohde & Schwarz ZV-Z51/3.5mm is a 50 Ohm calibration kit designed for precise two-port network analyzer calibration. It delivers systematic error correction across RF and microwave measurements, enabling repeatable accuracy in professional laboratory and field environments. The kit includes four essential calibration standards: Short, Open, Matched Load, and Thru, each manufactured to exacting tolerances to minimize measurement uncertainty. Key Features The Short Circuit standard characterizes and corrects reflection errors at the reference plane. The Open Circuit termination models and compensates for open circuit conditions in the measurement path. The Matched Load presents nominal 50 Ohm impedance to measure and correct transmission and reflection errors due to impedance mismatch. The Thru component provides direct port-to-port connection, effectively simulating zero-length trans



MODEL

Rohde & Schwarz ZV-Z51

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ZV-Z51

LISTING

<https://aumictechlabs.com/products/zv-z51-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

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The kit includes four essential calibration standards: Short, Open, Matched Load, and Thru, each manufactured to exacting tolerances to minimize measurement uncertainty.

Technical Specifications
Connector Type: 3.5mm (K) Impedance: 50 Ohm Calibration Method: Two-port calibration

Key Features
The Short Circuit standard characterizes and corrects reflection errors at the reference plane. The Open Circuit termination models and compensates for open circuit conditions in the measurement path. The Matched Load presents nominal 50 Ohm impedance to measure and correct transmission and reflection errors due to impedance mismatch. The Thru component provides direct port-to-port connection, effectively simulating zero-length transmission line behavior and calibrating for transmission errors and direct coupling. All standards employ high-quality 3.5mm connectors engineered for durability and consistent electrical contact through repeated laboratory and field use.

Typical Applications
The ZV-Z51 serves system integrators, laboratories, and enterprise procurement requiring accurate RF and microwave characterization. It is essential for S-parameter measurement, impedance analysis, and systematic error removal in network analyzer workflows.

Compatibility & Integration
The ZV-Z51/3.5mm works with Rohde & Schwarz network analyzers equipped with 3.5mm connectors. It is generally compatible with other network analyzers featuring 3.5mm interfaces at 50 Ohm impedance. Users must verify compatibility with their specific network analyzer before deployment.

ZVZ51 Characteristics / Specifications

PARAMETER	VALUE
Model	ZV Z51
Manufacturer	Rohde & Schwarz
Instrument Type	Automatic VNA Calibration Unit
Alias	R&S ZV-Z51; 1164.0515.30; 1164.0515.70
Number of Calibration Ports	4
Frequency Range	300 kHz to 8 GHz
Connector Options	type N 50 ohm female or 3.5 mm female
Impedance	50 ohm
Order Number 3.5 mm	1164.0515.30
Order Number Type N	1164.0515.70
Nominal Input Level Range	minus 45 dBm to plus 20 dBm
Damage Level	plus 23 dBm
Damage DC Voltage	12 V
Calibration Time 4 Ports 201 Points 1 kHz BW	27 s
Calibration Time 4 Ports 401 Points 1 kHz BW	34 s
Calibration Time 4 Ports 201 Points 100 Hz BW	67 s
Control Interface	USB type B (power and control)
RF Connector Equality	all ports same sex/type
Unused Port Termination	50 ohm match required
Host Analyzers	ZVA, ZVT, ZVB series
Recommended Cal Power	minus 10 dBm at calibration ports when Automatic Power Reduction is used
Warm Up	extremely short at room temperature after USB connect
Family 4 Port Sibling 24 GHz	ZV Z52 10 MHz to 24 GHz model .30

PARAMETER	VALUE
Family 2 Port Sibling	ZV Z53
Family 40 GHz Sibling	ZV Z54 2.92 mm
Family 50 GHz Sibling	ZV Z55 2.4 mm
Recharacterization	user may include adapters as part of the unit using a manual kit
Form	USB powered electronic calibration box Notes Specs from R&S ZV-Z51/Z52 technical information and ZV-Z5x family tables. Confirm .30 (3.5 mm) versus .70 (N). Terminate unused ports. Do not exceed plus 23 dBm or 12 V DC.

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.

Specifications

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Form	USB powered electronic calibration box

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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

788 S 500 E, Pleasant Grove, UT 84062
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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.