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Data Sheet

August 12, 2026

ROHDE & SCHWARZ

Rohde and Schwarz RT-ZD40 Active Probe, Differential, 0 Hz to 4 GHz

Rohde & Schwarz Laboratory Measurement Instruments. Bandwidth: DC to 4.5 GHz, Voltage: ± 30 V.



MODEL	CALIBRATION
Rohde & Schwarz RT-ZD40	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
RT-ZD40	https://aumictechlabs.com/products/rt-zd40-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz RT-ZD40 is an active differential probe engineered for precision measurement of high-frequency differential signals from DC to 4.5 GHz. It delivers high input impedance ($1\text{ M}\Omega \parallel 0.4\text{ pF}$) and low input capacitance to minimize circuit loading while maintaining excellent signal fidelity across demanding applications in signal integrity, high-speed digital design, and power electronics. Technical Specifications Bandwidth: DC to 4.5 GHz Attenuation Factor: 10:1 Input Impedance (Differential): $1\text{ M}\Omega \parallel 0.4\text{ pF}$ Maximum Input Voltage (Between Signal Sockets): $\pm 5\text{ V}$ with $\pm 5\text{ V}$ offset compensation Maximum Input Voltage (Each Signal Socket to Ground): $\pm 8\text{ V}$ with $\pm 22\text{ V}$ offset compensation Maximum Non-Destructive Input Voltage: $\pm 30\text{ V}$ Dynamic Range (Differential Input): $\pm 5\text{ V}$ with $\pm 5\text{ V}$ offset capability Operating Voltage Window (Each Pin to GND): $\pm 8\text{ V}$ with $\pm 22\text{ V}$ common mode offset capability ProbeMeter Measurement Error: $<0.1\%$ Cable Length: 1.2 m Key Features High common-mode rejection

suppresses interference in high-clock-rate systems Very low added noise for error-free broadband signal transmission Integrated high-precision DC voltmeter with ProbeMeter functionality Temperature-stable performance with extremely low zero and gain drift Variable pitch width for connection to diverse devices under test Integrated micro button for instrument control

Typical Applications Signal integrity analysis on high-speed digital designs Power electronics measurements requiring differential coupling Common-mode noise rejection in broadband signal environments Non-invasive probing where circuit loading must be minimized

Compatibility & Integration The probe connects via Rohde & Schwarz probe interface using a male precision 7 mm BNC connector and six pogo pins for supply voltage, analog signal transmission, and digital data. Direct integration with compatible Rohde & Schwarz oscilloscopes provides software-controlled operation. An optional adapter enables use with base units lacking the native probe interface. Supported oscilloscopes are detailed in the product datasheet.

Features & description

From manufacturer datasheet

Features

- Bandwidth: 4.5 GHz calculated from rise time; 5.5 GHz (meas.)
- Rise time (10%–90%): <90 ps; <73 ps (meas.)
- Attenuation: 10:1; error $\pm 0.5\%$ (0 °C to +50 °C) after digital correction
- Diff. input R/C: 1 M Ω || 0.4 pF (between sockets); 500 k Ω / 0.65 pF each to GND
- Dynamic range (diff.): ± 5 V (+ offset); offset ± 5 V
- Operating window each pin to GND: ± 8 V; CM offset ± 22 V
- Non-destructive: ± 30 V DC peak each signal to ground
- Noise (ref. probe input): 3 mV RMS (meas.)
- Flatness: 0.2 dB (100 kHz–100 MHz); 0.5 dB to 1 GHz (meas.)
- CMRR: >50 dB DC–10 kHz; 40 / 30 / 20 dB higher bands (meas.)
- Propagation delay: 5.5 ns (meas.); slew ~ 60 V/ns (meas.)
- THD: -35 dB (meas.) at 10 Vpp / 1 GHz
- Zero error: ± 3 mV (+15...+35 °C) after digital correction

RTZD40 Characteristics / Specifications

PARAMETER	VALUE
Model	RT-ZD40
Manufacturer	Rohde & Schwarz
Instrument Type	Active Differential Voltage Probe
Alias	RT-ZD40; R&S RT-ZD40 Electrical
Bandwidth	4.5 GHz calculated from rise time; 5.5 GHz (meas.)
Rise time	<90 ps (<73 ps meas.)
Attenuation	10:1; error $\pm 0.5\%$ (0 °C to +50 °C) after digital correction
Diff. R/C	1 M Ω / 0.4 pF
Dynamic range	± 5 V; offset ± 5 V
Rise time (10%–90%)	<90 ps; <73 ps (meas.)
Diff. input R/C	1 M Ω 0.4 pF (between sockets); 500 k Ω / 0.65 pF each to GND
Dynamic range (diff.)	± 5 V (+ offset); offset ± 5 V
Operating window each pin to GND	± 8 V; CM offset ± 22 V
Non-destructive	± 30 V DC peak each signal to ground
Noise (ref. probe input)	3 mV RMS (meas.)
Flatness	0.2 dB (100 kHz–100 MHz); 0.5 dB to 1 GHz (meas.)
CMRR	>50 dB DC–10 kHz; 40 / 30 / 20 dB higher bands (meas.)
Propagation delay	5.5 ns (meas.); slew ~ 60 V/ns (meas.)
THD	–35 dB (meas.) at 10 V _{pp} / 1 GHz
Zero error	± 3 mV (+15...+35 °C) after digital correction

RTZD40 Specifications

PARAMETER	VALUE
Applications	Multi-GHz differential probing; high-speed serial / RF front-end debug on compatible R&S oscilloscopes.
Key Features	- Bandwidth: 4.5 GHz calculated from rise time; 5.5 GHz (meas.)
Technical Specifications	Model: RT-ZD40
Electrical	Bandwidth: 4.5 GHz (5.5 GHz meas.)

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

Specifications

PARAMETER	VALUE
Model	RT-ZD40
Manufacturer	Rohde & Schwarz
Instrument Type	Active Differential Voltage Probe
Alias	RT-ZD40; R&S RT-ZD40

Electrical

Electrical

PARAMETER	VALUE
Bandwidth	4.5 GHz (5.5 GHz meas.)
Rise time	<90 ps (<73 ps meas.)
Attenuation	10:1
Diff. R/C	1 MΩ / 0.4 pF
Dynamic range	±5 V; offset ±5 V

Non-destruct: ±30 V

Notes

Specs from R&S RT-Zxx High Bandwidth Probes datasheet (RT-ZD40 section). Listing title may say “0 Hz to 4 GHz”; OEM calculated BW is 4.5 GHz. Confirm order number on the unit.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.