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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz ESVD 20MHz-1GHz EMI Test Receiver

Rohde & Schwarz ESVD EMI Test Receiver 20 MHz to 1 GHz The R&S ESVD is a triple-conversion test receiver for digital mobile-radio coverage and commercial EMI. Base range is 20 MHz to 1000 MHz, optionally 2050 MHz. A crystal-stabilized synthesizer steps in 100 Hz with GSM-compliant frequency accuracy. IF filters in the third IF (10.7 MHz) are 10 kHz, 120 kHz, 300 kHz, and 1 MHz with group-delay optimization. Parallel peak, average, and quasi-peak detectors, a precise I/Q demodulator, and a greater than 70 dB envelope-detector dynamic range support both RFI and field-strength work. The R&S ESVD is a triple-conversion test receiver for digital mobile-radio coverage and commercial EMI. Base range is 20 MHz to 1000 MHz, optionally 2050 MHz. A crystal-stabilized synthesizer steps in 100 Hz with GSM-compliant frequency accuracy. IF filters in the third IF (10.7 MHz) are 10 kHz, 120 kHz, 300 kHz, and 1 MHz with group-delay optimization. Parallel peak, average, and quasi-peak detectors, a precise I/Q demodulator, and a greater than 70 dB envelope-detector dynamic range support both RFI and field-strength work.



MODEL

Rohde & Schwarz ESVD

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ESVD

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz ESVD is a triple-conversion heterodyne EMI test receiver engineered for precise electromagnetic interference measurements across 20 MHz to 1 GHz, with optional extension to 2.05 GHz. This instrument combines a crystal-stabilized synthesizer, high-level mixers, and parallel Peak/Average/Quasi-Peak detectors to deliver simultaneous multi-mode signal analysis. Its modular architecture, switchable RF attenuation (0 to 120 dB in 10 dB steps), and group-delay optimized IF filters support both fixed-location EMI surveys and mobile radio network diagnostics.

Technical Specifications

Frequency Range: 20 MHz to 1 GHz standard; optional extension to 2.05 GHz

Receiver Architecture: Triple-conversion heterodyne with intermediate frequencies at 1354.7 MHz or 394.7 MHz (first IF), 74.7 MHz (second IF), and 10.7 MHz (third IF)

RF Attenuator: 0 to 120 dB in 10 dB increments

Preselector Configuration: One fixed-tuning unit plus five tracking preselectors; Option ESVD-B2 adds four additional fixed-tuning filters

Synthesizer (1st LO): Crystal-stabilized, 100 Hz step resolution, sweep-capable for rapid frequency scans

Level Measurement Range: -14 dBμV to +137 dBμV

IF Bandwidths: 10 kHz, 120 kHz, 300 kHz, 1 MHz (third IF stage)

Frequency Setting Error: 70 dB dynamic range

Parallel Peak, Average, and Quasi-Peak detectors with IF bandwidth correction (PK/MHz) for broadband interference measurement

Switchable preamplifier between preselector and first mixer

Automatic overload detection across receiver stages

I/Q demodulator for digital signal analysis; Option ESVD-B1 supports GSM and PCN systems

Built-in test functions and permanently activated peak detector for measurement monitoring

Typical Applications

EMI compliance testing and RFI surveys

Mobile radio network planning and operation (GSM, PCN)

Fixed and mobile coverage measurements

Frequency coordination and interference identification

Compatibility & Integration

Standards compliance: CISPR, CENELEC, ETSI, FCC, VCCI, VDE, EN55011-EN55022, VDE 0871-0879, CISPR 16-1, VDE 0876, ANSI C63.2

Frequency accuracy aligns with GSM recommendations

Features & description

From manufacturer datasheet

Features

- RF attenuator 0 to 120 dB in 10 dB steps
- One fixed and five tracking preselectors; ESVD-B2 adds four fixed filters
- Switchable wide-dynamic-range preamplifier between preselector and 1st mixer
- 1st IF 1354.7 MHz or 394.7 MHz; 2nd IF 74.7 MHz; 3rd IF 10.7 MHz
- Peak indication with automatic IF-bandwidth correction (PK/MHz)
- Automatic overload detection in relevant stages

Applications

- GSM / PCN coverage and field-strength surveys
- EMI to CISPR, CENELEC, ETSI, FCC, VCCI, VDE
- Fixed and mobile network planning measurements
- Automatic EMI scans (built-in intelligence reduces test time)
- I/Q evaluation of digital mobile-radio signals

ESVD Characteristics / Specifications

PARAMETER	VALUE
Model	ESVD
Manufacturer	Rohde & Schwarz
Instrument Type	EMI / coverage test receiver
Alias	ESVD 20 MHz to 1 GHz; R&S ESVD
Frequency Range Standard	20 MHz to 1000 MHz
Frequency Range Optional	20 MHz to 2050 MHz
Frequency Resolution	100 Hz
Frequency Setting Error	less than 1e-7
Level Range	minus 14 dBμV to +137 dBμV
RF Attenuator	0 to 120 dB in 10 dB steps
Preselectors	1 fixed + 5 tracking
Additional Filters Option	ESVD-B2, 4 fixed tuned
Preamplifier	switchable, between preselector and 1st mixer
IF First	1354.7 MHz or 394.7 MHz
IF Second	74.7 MHz
IF Third	10.7 MHz
IF Bandwidths	10 kHz, 120 kHz, 300 kHz, 1 MHz
Envelope Detector Dynamic	greater than 70 dB
Detectors	peak, average, quasi peak (parallel)
IQ Demodulator	precise I/Q
Conversion Type	triple superhet
First LO	crystal synthesizer, 100 Hz, sweep mode
Frequency Accuracy	GSM recommendation class
RF Input Impedance	50 ohm class
Remote Interface	IEC IEEE bus

PARAMETER	VALUE
Display	screenless class (PC spectral display via 1EE05)
Related ESVB Range	20 MHz to 2 GHz with DAB/DVB SAW filters
Related ESVS10 Range	20 MHz to 1000 MHz commercial EMI
Standards	CISPR, CENELEC, ETSI, FCC, VCCI, VDE
Overload Monitor	automatic, permanently active peak detector Notes Specs from R&S ESVD product descriptions. Confirm the 2050 MHz option and ESVD-B2 extra preselectors. This is not ESVB (DAB/DVB SAW) or ESVS10 (commercial LCD receiver).
Bandwidth	correction (PK/MHz) - Automatic overload detection in relevant stages

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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Frequency Resolution	100 Hz
Frequency Setting Error	less than 1e-7
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Notes

Specs from R&S ESVD product descriptions. Confirm the 2050 MHz option and ESVD-B2 extra preselectors. This is not ESVB (DAB/DVB SAW) or ESVS10 (commercial LCD receiver).

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
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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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.