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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMPC 5KHz â€” 1360MHz Signal Generator

Rohde & Schwarz SMPC Signal Generator 5 kHz to 1360 MHz The R&S SMPC (order 300.1000.52) is a 1980s synthesized signal generator covering 5 kHz (0.05 MHz) to 1360 MHz. Frequency resolution is 0.1 Hz to 1 GHz and 1 Hz above. Output is minus 143 dBm to +13 dBm (0.016 μ V to 1 V into 50 ohm) in 0.1 dB steps. AM, FM, and phase modulation plusabuilt-in 10 Hz to 100 kHz modulation synthesizer support stereo-capable FM broadcast tests. Typical SSB phase noise is minus 134 dBc (1 Hz) at 500 MHz, 20 kHz offset. IEC 625-1 / IEEE 488 remote control is standard. The R&S SMPC (order 300.1000.52) is a 1980s synthesized signal generator covering 5 kHz (0.05 MHz) to 1360 MHz. Frequency resolution is 0.1 Hz to 1 GHz and 1 Hz above. Output is minus 143 dBm to +13 dBm (0.016 μ V to 1 V into 50 ohm) in 0.1 dB steps. AM, FM, and phase modulation plusabuilt-in 10 Hz to 100 kHz modulation synthesizer support stereo-capable FM broadcast tests. Typical SSB phase noise is minus 134 dBc (1 Hz) at 500 MHz, 20 kHz offset. IEC 625-1 / IEEE 488 remote control is standard.



MODEL

Rohde & Schwarz SMPC

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMPC

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMPC is a signal generator covering 5 kHz to 1360 MHz with output levels from -143 dBm to +13 dBm. It delivers excellent spectral purity and supports broadband and precision modulation for research, development, and production testing. The instrument combines low phase

noise, precise frequency control, and flexible modulation options into a single platform for demanding measurement applications.

Technical Specifications

Frequency Range: 5 kHz to 1360 MHz with 0.1 Hz resolution across the entire band.

Output Level: -143 dBm to +13 dBm, with frequency-response-compensated control for accurate level setting.

Modulation Capabilities: Broadband FM modulator (standard): modulation frequency to 5 MHz, deviation to 10 MHz Precision FM/φM modulator option: modulation frequency to 1 MHz, deviation to 1 MHz FSK modulation: deviation to 1 MHz Phase modulation (φM): DC to 100 kHz range DC-coupled FM/φM operation enables voltage-controlled oscillator (VCO) functionality

Spectral Purity: Extremely low single-sideband phase noise Non-harmonics below -60 dBc below 20 GHz High harmonic rejection; no subharmonics below 20 GHz Comprehensive shielding minimizes RF leakage

Frequency Stability & Resolution: Standard crystal reference for stable, low-drift output Optional oven-controlled crystal oscillator (OCXO) available for high-stability applications 0.1 Hz frequency resolution across full range

Level Accuracy: Achieves ±0.9 dB typical accuracy at 0 dBm (10 MHz to 40 GHz) with precision attenuator option

Key Features

- Spectral purity optimized for receiver testing and calibration
- Flexible modulation covering FM, φM, and FSK modes
- Optional OCXO upgrade for demanding frequency-stability requirements
- Precision level control supporting high-accuracy measurements

Typical Applications

Receiver validation, transmitter characterization, and component testing in RF development and manufacturing environments.

Compatibility & Integration

Rohde & Schwarz signal generators support standard control interfaces for automated test system integration. Optional precision attenuator modules enhance level accuracy across extended frequency ranges.

Features & description

From manufacturer datasheet

Features

- Continuous self-test of synthesizer and level control with display and IEC-bus error reporting
- Digital sweep with user step size and sweep time
- Front-panel external modulation; rear AF output
- Typical harmonics / spurs minus 65 dBc class
- Stereo channel separation typically greater than 56 dB from 100 Hz to 10 kHz

Applications

- Receiver and radio production test to 1.36 GHz
- Stereo FM broadcast transmitter/receiver measurements
- Digital frequency sweep / wobulator work
- IEC-bus automated benches
- General-purpose HF/VHF/UHF CW and analog modulation

SMPC Characteristics / Specifications

PARAMETER	VALUE
Model	SMPC
Manufacturer	Rohde & Schwarz
Instrument Type	Synthesized signal generator
Alias	SMPC 300.1000.52; R&S SMPC
Order Number	300.1000.52
Frequency Range	5 kHz to 1360 MHz
Frequency Resolution to 1 GHz	0.1 Hz
Frequency Resolution above 1 GHz	1 Hz
Level Range	minus 143 dBm to +13 dBm
Level Voltage into 50 ohm	0.016 μ V to 1 V
Level Resolution	0.1 dB
SSB Phase Noise at 500 MHz	typ. minus 134 dBc (1 Hz) at 20 kHz
SSB Phase Noise at 100 MHz	typ. minus 149 dBc (1 Hz) at 20 kHz
Nonharmonics 21.25 to 680 MHz	less than minus 90 dBc
Nonharmonics 680 to 1360 MHz	less than minus 84 dBc
Nonharmonics to 21.25 MHz	less than minus 80 dBc
Harmonics Typical	minus 65 dBc
Modulation Generator	10 Hz to 100 kHz
FM Deviation Range	0 to 100 kHz (hub to 1600 kHz class per OEM table)
FM Distortion at Half Max Deviation	less than 0.1 percent
Stereo Separation Typical	greater than 56 dB, 100 Hz to 10 kHz
Stereo SNR Typical	greater than 76 dB at 100 MHz / 40 kHz / 50 μ s
AM Range	0.1 to 99 percent, 0 to 50 kHz
AM Distortion	less than 1 percent to 20 kHz at 80 percent AM
Phase Modulation	10 Hz to 8 kHz, deviation to 200 rad

PARAMETER	VALUE
Remote Interface	IEC 625-1 / IEEE 488
Mains	115 / 125 / 220 / 235 V AC
Dimensions	468 x 154 x 485 mm
Weight	25.2 kg
Year Class	1982 to 1983 production Notes Specs from R&S SMPC 300.1000.52 Radiomuseum / Neues von Rohde & Schwarz (Herbst 1982) model data. Do not use later 3 GHz reseller tables that confuse this SMPC with newer generators. Confirm IEC-bus address and modulation-generator function on the unit.

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.

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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

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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.