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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMR27 10MHz – 27GHz Signal Generator

Rohde & Schwarz SMR27 Microwave Signal Generator 10 MHz to 27 GHz The R&S SMR27 is the 27 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 27 GHz (order 1104.0002.27); option SMR-B11 extends the lower limit to 10 MHz. Specified maximum level without IF-input options is greater than +11 dBm from 20 GHz to 27 GHz (greater than +9 dBm with attenuator SMR-B15). Brochure high-power note is greater than +11 dBm at 27 GHz. Pulse modulation is standard. The R&S SMR27 is the 27 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 27 GHz (order 1104.0002.27); option SMR-B11 extends the lower limit to 10 MHz. Specified maximum level without IF-input options is greater than +11 dBm from 20 GHz to 27 GHz (greater than +9 dBm with attenuator SMR-B15). Brochure high-power note is greater than +11 dBm at 27 GHz. Pulse modulation is standard.



MODEL

Rohde & Schwarz SMR27

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMR27

LISTING

<https://aumictechlabs.com/products/smr27-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMR27 is a microwave signal generator delivering precise, spectrally pure signals across 10 MHz to 27 GHz. It combines stable frequency synthesis with flexible modulation architecture - supporting CW, pulse, AM/FM, FSK, and phase modulation - making it suitable for

component testing, system validation, and RF/microwave development. Output power exceeds +11 dBm at 27 GHz with frequency-response-compensated level control down to -20 dBm (extendable to -130 dB with optional attenuator). The instrument achieves low SSB phase noise and high spurious suppression through advanced frequency synthesis and microwave filtering. Pulse modulation delivers on/off ratios better than 80 dB with rise/fall times under 12 ns and pulse widths as short as 25 ns. Optional modules enable AM/FM generation with a 5 MHz FM bandwidth, FSK data rates to 2 MHz, independent pulse generation to 10 MHz, analog and digital sweeps, and vector modulation upconversion to 40 GHz via IF input. All modulation modes stack for complex signal synthesis - pulse plus FM for Doppler simulation, for example. Frequency resolution reaches 100.0 mHz standard (0.1 Hz with option). A crystal reference oscillator provides baseline stability; an optional OCXO upgrades performance for stringent accuracy requirements. The compact architecture integrates multiple signal generation functions without external boxes.

Features & description

From manufacturer datasheet

Features

- Standard pulse modulator, greater than 80 dB on/off, less than 12 ns edges above 450 MHz •
- Optional SMR-B5 AM/FM/scan and 0.1 Hz to 10 MHz LF generator • Optional SMR-B4 analog ramp sweep, min. 600 MHz/ms above 2 GHz • 2.9 mm adapter supplied; 50 setups; 3-year calibration cycle
- Frequency resolution 1 kHz, or 0.1 Hz with SMR-B3

Applications

- K-band CW and pulse stimulus • Radar and microwave receiver testing • Scalar network analysis with digital or optional analog ramp sweep • IF upconversion (SMR-B24) of SMIQ / AMIQ signals •
- Compact 2 HU bench or rack source

SMR27 Characteristics / Specifications

PARAMETER	VALUE
Model	SMR27
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 27; R&S SMR27
Order Number	1104.0002.27
Frequency Range Standard	1 GHz to 27 GHz
Frequency Range with SMR B	10 MHz to 27 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution with SMR B	0.1 Hz
Frequency Setting Time	less than 10 ms + 2 ms/GHz
Maximum Level Brochure at 27 GHz	greater than +11 dBm
Maximum Level 20 GHz to 27 GHz	greater than +11 dBm (no IF option, no attenuator)
Maximum Level with SMR B15 20 to 27 GHz	greater than +9 dBm
Minimum Level Standard	minus 20 dBm
Minimum Level with Attenuator	minus 130 dBm
Level Resolution	0.1 dB or 0.01 dB selectable
Level Error at 0 dBm to 20 GHz	less than 1 dB
Level Error at 0 dBm above 20 GHz	less than 1.4 dB
Output Impedance	50 ohm
Output SWR	less than 2
SSB Phase Noise at 10 GHz	less than minus 83 dBc (1 Hz) at 10 kHz offset, CW
Harmonics to 20 GHz	less than minus 40 dBc
Subharmonics above 20 GHz	less than minus 30 dBc
Nonharmonics above 20 GHz	less than minus 54 dBc
Pulse On Off Ratio	greater than 80 dB

PARAMETER	VALUE
Pulse Rise Fall above 450 MHz	less than 12 ns
Reference Aging Standard	1e-6 per year
Reference Aging OCXO SMR B	less than 1e-7 per year
Dimensions	427 × 88 × 450 mm
Weight Fully Equipped	less than 12 kg
Mains	100 to 120 V or 200 to 240 V autoranging, max 200 VA
RF Adapter Supplied	2.9 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50
Attenuator Option	SMR-B15 (SMR20/27) Notes Specs from the R&S SMR data sheet. This file is the 27 GHz SMR27. Confirm B11, B3, B15, and B5. Do not use SMR-B17 (that attenuator is for SMR30/40).

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to +55 C
Operating Temperature	0 C to +55 C
Stored Setups	50
Attenuator Option	SMR-B15 (SMR20/27) Notes Specs from the R&S SMR data sheet. This file is the 27 GHz SMR27. Confirm B11, B3, B15, and B5. Do not use SMR-B17 (that attenuator is for SMR30/40).

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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PARAMETER	VALUE
Model	SMR27
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 27; R&S SMR27
Order Number	1104.0002.27
Frequency Range Standard	1 GHz to 27 GHz
Frequency Range with SMR B11	10 MHz to 27 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution with SMR B3	0.1 Hz
Frequency Setting Time	less than 10 ms + 2 ms/GHz
Maximum Level Brochure at 27 GHz	greater than +11 dBm
Maximum Level 20 GHz to 27 GHz	greater than +11 dBm (no IF option, no attenuator)
Maximum Level with SMR B15 20 to 27 GHz: greater than +9 dBm	
Specifications	
PARAMETER	VALUE
Minimum Level Standard	minus 20 dBm
Minimum Level with Attenuator	minus 130 dBm
Level Resolution	0.1 dB or 0.01 dB selectable
Level Error at 0 dBm to 20 GHz: less than 1 dB	
Level Error at 0 dBm above 20 GHz: less than 1.4 dB	
Specifications	
PARAMETER	VALUE
Output Impedance	50 ohm
Output SWR	less than 2
SSB Phase Noise at 10 GHz	less than minus 83 dBc (1 Hz) at 10 kHz offset, CW

PARAMETER	VALUE
Harmonics to 20 GHz	less than minus 40 dBc
Subharmonics above 20 GHz	less than minus 30 dBc
Nonharmonics above 20 GHz	less than minus 54 dBc
Pulse On Off Ratio	greater than 80 dB
Pulse Rise Fall above 450 MHz	less than 12 ns
Reference Aging Standard	1e-6 per year
Reference Aging OCXO SMR B1	less than 1e-7 per year
Dimensions	427 x 88 x 450 mm
Weight Fully Equipped	less than 12 kg
Mains	100 to 120 V or 200 to 240 V autoranging, max 200 VA
RF Adapter Supplied	2.9 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50
Attenuator Option	SMR-B15 (SMR20/27)

Notes

Specs from the R&S SMR data sheet. This file is the 27 GHz SMR27. Confirm B11, B3, B15, and B5. Do not use SMR-B17 (that attenuator is for SMR30/40).

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.