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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMR30 10MHz to 30GHz Signal Generator

Rohde & Schwarz SMR30 Microwave Signal Generator 10 MHz to 30 GHz The R&S SMR30 is the 30 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 30 GHz (order 1104.0002.30); option SMR-B11 extends the lower limit to 10 MHz. Standard resolution is 1 kHz (0.1 Hz with SMR-B3). Specified maximum level without IF-input options is greater than +9 dBm from 27 GHz to 30 GHz (greater than +7 dBm with attenuator SMR-B17). Pulse modulation is standard, with on/off ratio greater than 80 dB and rise/fall less than 12 ns above 450 MHz. The R&S SMR30 is the 30 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 30 GHz (order 1104.0002.30); option SMR-B11 extends the lower limit to 10 MHz. Standard resolution is 1 kHz (0.1 Hz with SMR-B3). Specified maximum level without IF-input options is greater than +9 dBm from 27 GHz to 30 GHz (greater than +7 dBm with attenuator SMR-B17). Pulse modulation is standard, with on/off ratio greater than 80 dB and rise/fall less than 12 ns above 450 MHz.



MODEL

Rohde & Schwarz SMR30

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMR30

LISTING

<https://aumictechlabs.com/products/smr30-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMR30 is a microwave signal generator spanning 10 MHz to 30 GHz, engineered for research, development, and production test environments requiring high spectral

purity and low phase noise. The base platform delivers CW generation with pulse modulation and digital frequency sweep, expandable through optional modules to include AM/FM modulation, phase modulation, FSK, and ASK capabilities. Its crystal reference oscillator ensures frequency stability, while advanced fractional-N synthesis and microwave filtering deliver excellent harmonic suppression. High-precision, frequency-response-compensated level control operates across a dynamic range extending to -130 dBm with optional RF attenuators. The compact design supports both laboratory and field deployment.

Technical Specifications

Frequency Range: 10 MHz to 30 GHz; expandable to 0.01 GHz with optional SMR-B11 Frequency Extension

Frequency Resolution: 100.0 mHz standard; 0.1 Hz with optional SMR-B3 upgrade

Output Power: Greater than $+9$ dBm at 30/40 GHz; setting range extendable to -130 dBm with optional attenuators

Pulse Modulation: On/off ratio better than 80 dB; rise/fall time shorter than 12 ns; pulse widths down to 25 ns; optional SMR-B14 Pulse Generator for externally triggered single and double pulses up to 10 MHz

Sweep Modes: Digital frequency sweep with 10 ms minimum step time; 20 dB level sweep for compression testing; analog ramp sweep with minimum 600 MHz/ms sweep rate above 2 GHz

Optional Modulation: AM/FM/Scan via SMR-B5; phase modulation; FSK and ASK; all modes combinable for complex signal generation

Frequency Stability: Built-in crystal reference; optional OCXO Reference Oscillator (SMR-B1) for enhanced accuracy

Spectral Performance: Fractional-N divider synthesis for low SSB phase noise; modern microwave filters for harmonic suppression

Key Features

High-precision level control with frequency response compensation

High-contrast LC display with user-assignable keys

One-hand operation capability

Online help with IEC/IEEE-bus command support

Compact, lightweight construction

Typical Applications

Component and subsystem characterization; amplifier and mixer compression testing; modulated signal generation; frequency sweep validation; pulse signal development.

Compatibility & Integration

IEC/IEEE-bus control interface; optional modulation and synthesis upgrades; RF attenuator integration for extended dynamic range.

Features & description

From manufacturer datasheet

Features

- Standard pulse modulator; optional SMR-B14 pulse generator (20 ns to 1 s width) • Optional SMR-B5 AM/FM/scan and LF generator 0.1 Hz to 10 MHz • Optional SMR-B4 analog ramp sweep, min. 600 MHz/ms above 2 GHz • 50 stored setups; 3-year calibration cycle • 2.92 mm (2.9 mm) adapter supplied for SMR27/30/40

Applications

- Radar and microwave CW / pulse stimulus to 30 GHz • Receiver calibration with frequency-response-compensated leveling • Scalar network analysis with digital or optional analog ramp sweep • Upconversion of SMIQ / AMIQ IF (option SMR-B24) • Field and rack use (less than 12 kg, 2 HU)

SMR30 Characteristics / Specifications

PARAMETER	VALUE
Model	SMR30
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 30; R&S SMR30
Order Number	1104.0002.30
Frequency Range Standard	1 GHz to 30 GHz
Frequency Range with SMR B	10 MHz to 30 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 1 GHz to 18 GHz	greater than +8 dBm (no attenuator)
Maximum Level 27 GHz to 30 GHz	greater than +9 dBm (no IF option, no attenuator)
Maximum Level with SMR B17 27 to 30 GHz	greater than +7 dBm
Minimum Level Standard	minus 20 dBm (underrange below 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	less than 1 dB to 20 GHz; less than 1.4 dB above 20 GHz
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 30 MHz to 20 GHz	less than minus 55 dBc / less than minus 40 dBc
Subharmonics above 20 GHz	less than minus 30 dBc
Nonharmonics above 20 GHz	less than minus 54 dBc (offset greater than 50 kHz)
Pulse On Off Ratio	greater than 80 dB
Pulse Rise Fall above 450 MHz	less than 12 ns

PARAMETER	VALUE
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 50 to 400 Hz or 200 to 240 V 50 to 60 Hz, max 200 VA
RF Adapter Supplied	2.9 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50 Notes Specs from the R&S SMR microwave signal generator data sheet (version 05.00). Confirm SMR-B11 (10 MHz), B3 (0.1 Hz), B15/B17 attenuator, and B5 AM/FM on the option label. This file is the 30 GHz SMR30, not SMR27 or SMR40.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to +55 C
Operating Temperature	0 C to +55 C
Stored Setups	50 Notes Specs from the R&S SMR microwave signal generator data sheet (version 05.00). Confirm SMR-B11 (10 MHz), B3 (0.1 Hz), B15/B17 attenuator, and B5 AM/FM on the option label. This file is the 30 GHz SMR30, not SMR27 or SMR40.

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	SMR30
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 30; R&S SMR30
Order Number	1104.0002.30
Frequency Range Standard	1 GHz to 30 GHz
Frequency Range with SMR B11	10 MHz to 30 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 1 GHz to 18 GHz	greater than +8 dBm (no attenuator)
Maximum Level 27 GHz to 30 GHz	greater than +9 dBm (no IF option, no attenuator)
Maximum Level with SMR B17 27 to 30 GHz: greater than +7 dBm	
Specifications	
PARAMETER	VALUE
Minimum Level Standard	minus 20 dBm (underrange below 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	less than 1 dB to 20 GHz; less than 1.4 dB above 20 GHz
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 30 MHz to 20 GHz	less than minus 55 dBc / less than minus 40 dBc
Subharmonics above 20 GHz	less than minus 30 dBc
Nonharmonics above 20 GHz	less than minus 54 dBc (offset greater than 50 kHz)

PARAMETER	VALUE
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 50 to 400 Hz or 200 to 240 V 50 to 60 Hz, max 200 VA
RF Adapter Supplied	2.9 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50

Notes

Specs from the R&S SMR microwave signal generator data sheet (version 05.00). Confirm SMR-B11 (10 MHz), B3 (0.1 Hz), B15/B17 attenuator, and B5 AM/FM on the option label. This file is the 30 GHz SMR30, not SMR27 or SMR40.

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.