

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMR50 10MHz to 50GHz Signal Generator

Rohde & Schwarz SMR50 Microwave Signal Generator 10 MHz to 50 GHz (with SMR B11) The R&S SMR50 is a microwave CW generator with pulse modulation covering 1 GHz to 50 GHz (order 1134.9008.50). Option SMR B11 Frequency Extension 0.01 GHz to 1 GHz extends the lower limit to 10 MHz, matching this listing. Optional SMR B5 AM/FM/scan modulator, optional RF attenuator (SMR B15/B17 family; B18 cited on SMR50/60 for minus 110 dBm class), rear connectors, and IF input convert the unit into a synthesized sweeper. Fractional-N synthesis and microwave output filters target receiver calibration and scalar network analysis. The R&S SMR50 is a microwave CW generator with pulse modulation covering 1 GHz to 50 GHz (order 1134.9008.50). Option SMR B11 Frequency Extension 0.01 GHz to 1 GHz extends the lower limit to 10 MHz, matching this listing. Optional SMR B5 AM/FM/scan modulator, optional RF attenuator (SMR B15/B17 family; B18 cited on SMR50/60 for minus 110 dBm class), rear connectors, and IF input convert the unit into a synthesized sweeper. Fractional-N synthesis and microwave output filters target receiver calibration and scalar network analysis. Receiver calibration to 50 GHz; scalar network analysis stimulus; radar and EMC pulse; antenna and component CW; synthesized ramp sweep with options.



MODEL

Rohde & Schwarz SMR50

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMR50

LISTING

<https://aumictechlabs.com/products/smr50-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMR50 is a microwave signal generator delivering broad frequency coverage from 10 MHz to 50 GHz for research, development, and production testing across communication standards and radar applications. This instrument combines signal generation with excellent spectral purity, low SSB phase noise, and high spurious suppression - critical for reliable receiver measurements. The SMR50 generates complex signals through combined modulation modes and offers flexible sweep capabilities with digital RF/level sweep as standard. Its frequency resolution reaches 1 kHz baseline, with 0.1 Hz enhancement available. Output power spans from $+3$ dBm at 50 GHz down to -20 dBm minimum, extendable to -110 dBm with optional RF attenuation. The instrument stores 50 complete setups and supports pulse modulation with >80 dB on/off ratio and <12 ns rise/fall time, alongside optional AM, FM, and FSK modulation. Frequency markers enable 10 user-selectable sweep points. Digital frequency sweep steps begin at 10 ms, while optional analog ramp sweep delivers up to 600 MHz/ms for frequencies above 2 GHz. High-precision level control compensates across the frequency response, and special microwave filters ensure excellent harmonic suppression. Operating modes include automatic, single-shot, manual, and externally triggered operation with linear or logarithmic sweep selection. The SMR50 employs a modular options concept for upgrading frequency extension, enhanced resolution, modulation capabilities, and attenuation performance. Calibration cycle is 3 years. Weight: 42 lbs.

SMR50 Characteristics / Specifications

PARAMETER	VALUE
Model	SMR50
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave Signal Generator
Alias	R&S SMR50; 1134.9008.50
Frequency Range Base	1 GHz to 50 GHz
Frequency Range with SMR B	10 MHz to 50 GHz
Frequency Resolution Standard	0.1 Hz class (1 kHz without SMR B3 on some SMR tables; 0.1 Hz with B3)
Frequency Resolution Alternate Listing	1 Hz / 100 mHz class depending on firmware/option
SSB Phase Noise 10 GHz 10 kHz Offset 1 Hz BW CW	less than minus 83 dBc
Harmonics 30 MHz to 20 GHz	less than minus 55 dBc (family table)
Harmonics above 20 GHz	less than minus 40 dBc
Subharmonicsfless than or equal to 20 GHz	less than minus 65 dBc
Subharmonicsfgreater than 20 GHz	less than minus 30 dBc
Nonharmonicsfless than or equal to 20 GHz offset greater than 50 kHz	less than minus 60 dBc
Nonharmonicsfgreater than 20 GHz	less than minus 54 dBc
Maximum Power at 50 GHz	greater than plus 3 dBm
Minimum Level Standard	minus 20 dBm class
Minimum Level with Attenuator Option	minus 110 dBm class (SMR B18 on SMR50/60; B15/B17 to minus 130 dBm on lower SMR models)
Level Resolution	0.1 dB or 0.01 dB selectable
Internal Reference Output	10 MHz, 1 V rms EMF, 50 ohm
LF Generator Range	0.1 Hz to 10 MHz, resolution 0.1 Hz
LF Open Circuit Voltage	40 mV to 4 V peak, resolution 1 mV

PARAMETER	VALUE
Pulse Repetition Period with Pulse Option	100 ns to 85 s
Pulse Width	20 ns to 1 s
Pulse Delay	20 ns to 1 s
Level Sweep Range	0 dB to 20 dB
Level Sweep Step	0.01 dB to 20 dB
Level Sweep Step Time	1 ms to 5 s
Digital Sweep Step Time	10 ms to 5 s
IF Input Frequency (option)	40 MHz to 6 GHz class (SMR B25 family) or DC to 700 MHz on lower models
RF Connector Class	2.4 mm / 2.92 mm microwave (confirm on unit)
Remote Control	IEC/IEEE (GPIB); later manuals also USB/LAN on some SMR
OCXO Option	SMR B1
AM FM SCAN Option	SMR B5 1104.3501.02/.03
Frequency Extension Option	SMR B11 1104.4250.02
Rear Connector Options	SMR B19 / B20
Family Siblings	SMR20/27/30/40/60 (1 GHz to 20/27/30/40/60 GHz) Notes Specs from R&S SMR family data sheet and SMR50/60 operating manual. Base instrument is 1 to 50 GHz; 10 MHz requires SMR B11. Attenuator option codes differ by model (B15/B17 vs B18). Confirm waveguide/coax connector and installedOptions before quoting minimum level or analog modulation.

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	SMR50
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave Signal Generator
Alias	R&S SMR50; 1134.9008.50
Frequency Range Base	1 GHz to 50 GHz
Frequency Range with SMR B11	10 MHz to 50 GHz
Frequency Resolution Standard	0.1 Hz class (1 kHz without SMR B3 on some SMR tables; 0.1 Hz with B3)
Frequency Resolution Alternate Listing	1 Hz / 100 mHz class depending on firmware/option
SSB Phase Noise 10 GHz 10 kHz Offset 1 Hz BW CW: less than minus 83 dBc	
Specifications	
PARAMETER	VALUE
Harmonics 30 MHz to 20 GHz	less than minus 55 dBc (family table)
Harmonics above 20 GHz	less than minus 40 dBc
Subharmonicsfless than or equal to 20 GHz	less than minus 65 dBc
Subharmonicsfgreater than 20 GHz	less than minus 30 dBc
Nonharmonicsfless than or equal to 20 GHz offset greater than 50 kHz: less than minus 60 dBc	
Specifications	
PARAMETER	VALUE
Nonharmonicsfgreater than 20 GHz	less than minus 54 dBc
Maximum Power at 50 GHz	greater than plus 3 dBm
Minimum Level Standard	minus 20 dBm class
Minimum Level with Attenuator Option	minus 110 dBm class (SMR B18 on SMR50/60; B15/B17 to minus 130 dBm on lower SMR models)
Level Resolution	0.1 dB or 0.01 dB selectable

PARAMETER	VALUE
Internal Reference Output	10 MHz, 1 V rms EMF, 50 ohm
LF Generator Range	0.1 Hz to 10 MHz, resolution 0.1 Hz
LF Open Circuit Voltage	40 mV to 4 V peak, resolution 1 mV
Pulse Repetition Period with Pulse Option	100 ns to 85 s
Pulse Width	20 ns to 1 s
Pulse Delay	20 ns to 1 s
Level Sweep Range	0 dB to 20 dB
Level Sweep Step	0.01 dB to 20 dB
Level Sweep Step Time	1 ms to 5 s
Digital Sweep Step Time	10 ms to 5 s
IF Input Frequency (option)	40 MHz to 6 GHz class (SMR B25 family) or DC to 700 MHz on lower models
RF Connector Class	2.4 mm / 2.92 mm microwave (confirm on unit)
Remote Control	IEC/IEEE (GPIB); later manuals also USB/LAN on some SMR
OCXO Option	SMR B1
AM FM SCAN Option	SMR B5 1104.3501.02/.03
Frequency Extension Option	SMR B11 1104.4250.02
Rear Connector Options	SMR B19 / B20
Family Siblings	SMR20/27/30/40/60 (1 GHz to 20/27/30/40/60 GHz)

Notes

Specs from R&S SMR family data sheet and SMR50/60 operating manual. Base instrument is 1 to 50 GHz; 10 MHz requires SMR B11. Attenuator option codes differ by model (B15/B17 vs B18). Confirm waveguide/coax connector and installed options before quoting minimum level or analog modulation.

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
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

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