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Data Sheet
August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMR20 10MHz â€“ 20GHz Signal Generator

Rohde & Schwarz SMR20 Microwave Signal Generator 10 MHz to 20 GHz The R&S SMR20 is the 20 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 20 GHz (order 1104.0002.20); option SMR-B11 extends the lower limit to 10 MHz. Brochure maximum level is greater than +10 dBm at 20 GHz. Specified maximum without IF-input options is greater than +10 dBm from 18 GHz to 20 GHz (greater than +8 dBm with attenuator SMR-B15). A 3.5 mm adapter is supplied. Pulse modulation is standard. The R&S SMR20 is the 20 GHz member of the SMR CW / pulse microwave generator family. Base coverage is 1 GHz to 20 GHz (order 1104.0002.20); option SMR-B11 extends the lower limit to 10 MHz. Brochure maximum level is greater than +10 dBm at 20 GHz. Specified maximum without IF-input options is greater than +10 dBm from 18 GHz to 20 GHz (greater than +8 dBm with attenuator SMR-B15). A 3.5 mm adapter is supplied. Pulse modulation is standard.

MODEL Rohde & Schwarz SMR20	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU SMR20	LISTING https://aumictechlabs.com/products/smr20-2/

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz SMR20 is a microwave signal generator delivering 10 MHz to 20 GHz frequency coverage for RF and microwave component testing, system integration, and laboratory calibration. The instrument combines broad frequency range with high signal purity, low phase

noise, and flexible modulation to support development and validation of RF systems across commercial, defense, and industrial applications.Technical Specifications Frequency Range Base model: 1 GHz to 20 GHz With Option B11 extension: 10 MHz to 1 GHz (extends lower limit) Frequency resolution: 1 kHz standard; 0.1 Hz with Option B3 Frequency switching time: +10 dBm at 20 GHz Minimum (standard): -20 dBm Minimum (with Option B17): -130 dBm Frequency-response-compensated control for levels above -20 dBm Signal Purity Low SSB phase noise via fractional-N frequency synthesis High spurious suppression through advanced synthesis architecture Excellent harmonics suppression from modern microwave output filtersKey Features Modulation & Sweep Standard CW with pulse modulation and digital frequency sweep Optional AM/FM and LF generator (Option B5) Optional synthesized sweep generator with analog ramp sweep (Option B4) Maximum ramp sweep rate: 600 MHz/ms for frequencies >2 GHz 10 user-selectable frequency markers for RF sweep Sweep modes: Automatic, singleshot, manual, externally triggered All modulation modes combinable - pulse+FM for Doppler/chirp simulation; AM+pulse for pulse radar; FM+AM for fading effects Optional ASK/FSK modulation and pulse generator for radar/EMC Optional IF upconversion for digitally modulated IF signals Physical & Maintenance Output connector: 3.5 mm female 3-year calibration cycle for low cost of ownershipTypical Applications RF and microwave component development, receiver testing, radar signal simulation, EMC compliance testing, and system-level validation requiring precise frequency synthesis and simultaneous modulation.

Features & description

From manufacturer datasheet

Features

• Lowest-frequency SMR microwave model; 3.5 mm (not 2.92 mm) adapter set • Standard pulse modulator, greater than 80 dB on/off • Optional SMR-B5 AM/FM/scan; SMR-B4 analog ramp sweep • 50 stored setups; 3-year calibration cycle • Frequency resolution 1 kHz, or 0.1 Hz with SMR-B3

Applications

• 20 GHz CW and pulse stimulus • Receiver calibration and microwave component test • Scalar network analysis with digital or optional analog ramp sweep • IF upconversion via SMR-B23 (DC to 700 MHz) or SMR-B25 (40 MHz to 6 GHz) • Compact 2 HU bench or rack source

SMR20 Characteristics / Specifications

PARAMETER	VALUE
Model	SMR20
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 20; R&S SMR20
Order Number	1104.0002.20
Frequency Range Standard	1 GHz to 20 GHz
Frequency Range with SMR B	10 MHz to 20 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 20 GHz	greater than +10 dBm
Maximum Level 18 GHz to 20 GHz	greater than +10 dBm (no IF option, no attenuator)
Maximum Level with SMR B15 18 to 20 GHz	greater than +8 dBm
Maximum Level 1 GHz to 18 GHz	greater than +11 dBm (no attenuator)
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
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 class	less than minus 55 dBc
Harmonics to 20 GHz	less than minus 40 dBc
Nonharmonics to 20 GHz	less than minus 60 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	3.5 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50
IF Input Options	SMR-B23 DC to 700 MHz; SMR-B25 40 MHz to 6 GHz
Attenuator Option	SMR-B15 Notes Specs from the R&S SMR data sheet. This file is the 20 GHz SMR20. Confirm B11, B3, B15, B5, and which IF-input option is fitted. Use 3.5 mm torque practice, not 2.92 mm adapters from SMR27/30/40.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to +55 C
Operating Temperature	0 C to +55 C
Stored Setups	50
IF Input Options	SMR-B23 DC to 700 MHz; SMR-B25 40 MHz to 6 GHz
Attenuator Option	SMR-B15 Notes Specs from the R&S SMR data sheet. This file is the 20 GHz SMR20. Confirm B11, B3, B15, B5, and which IF-input option is fitted. Use 3.5 mm torque practice, not 2.92 mm adapters from SMR27/30/40.

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

Specifications

PARAMETER	VALUE
Model	SMR20
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMR 20; R&S SMR20
Order Number	1104.0002.20
Frequency Range Standard	1 GHz to 20 GHz
Frequency Range with SMR B11	10 MHz to 20 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 20 GHz	greater than +10 dBm
Maximum Level 18 GHz to 20 GHz	greater than +10 dBm (no IF option, no attenuator)

Maximum Level with SMR B15 18 to 20 GHz: greater than +8 dBm

Specifications

PARAMETER	VALUE
Maximum Level 1 GHz to 18 GHz	greater than +11 dBm (no attenuator)
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

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 30 MHz class	less than minus 55 dBc
Harmonics to 20 GHz	less than minus 40 dBc
Nonharmonics to 20 GHz	less than minus 60 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	3.5 mm female
Operating Temperature	0 C to +55 C
Stored Setups	50
IF Input Options	SMR-B23 DC to 700 MHz; SMR-B25 40 MHz to 6 GHz
Attenuator Option	SMR-B15

Notes
Specs from the R&S SMR data sheet. This file is the 20 GHz SMR20. Confirm B11, B3, B15, B5, and which IF-input option is fitted. Use 3.5 mm torque practice, not 2.92 mm adapters from SMR27/30/40.

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

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