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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMY02 9KHz-2GHz Signal Generator

Rohde & Schwarz SMY02 Signal Generator 9 kHz to 2080 MHz The R&S SMY02 is the 2.08 GHz economy analog generator in the SMY family (SMY01 to 1040 MHz, SMY02 to 2080 MHz). Order 1062.5502.12. FractionalNsingle loop synthesis, AM/FM/phase/pulse, 1 Hz resolution, and a 1 Hz to 500 kHz AF synthesizer. Level minus 140 to plus 13 dBm (plus 19 dBm overrange); option SMY B40 raises power to plus 19 dBm specified (plus 25 dBm overrange) and speeds pulse edges. RF reverse protection 50 W on SMY02. AM/FM/phase receiver test; FM stereo; pager FM DC; component and mixer drive; ATE IEC 625; service and production economy RF source. The R&S SMY02 is the 2.08 GHz economy analog generator in the SMY family (SMY01 to 1040 MHz, SMY02 to 2080 MHz). Order 1062.5502.12. FractionalNsingle loop synthesis, AM/FM/phase/pulse, 1 Hz resolution, and a 1 Hz to 500 kHz AF synthesizer. Level minus 140 to plus 13 dBm (plus 19 dBm overrange); option SMY B40 raises power to plus 19 dBm specified (plus 25 dBm overrange) and speeds pulse edges. RF reverse protection 50 W on SMY02. AM/FM/phase receiver test; FM stereo; pager FM DC; component and mixer drive; ATE IEC 625; service and production economy RF source.



MODEL

Rohde & Schwarz SMY02

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMY02

LISTING

<https://aumictechlabs.com/products/smy02-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMY02 is a synthesized signal generator covering 9 kHz to 2080 MHz, engineered for RF component testing, receiver verification, and automated production environments. It delivers cost-effective signal generation with excellent . The instrument supports AM, FM, phase, and pulse modulation - simultaneously where required - with a mechanical attenuator extending dynamic range by 135 dB. Output levels span -140 dBm to +13 dBm standard, with overrange to +25 dBm available. SSB phase noise measures better than -114 dBc at 1 GHz (20 kHz offset), ensuring low residual FM for demanding S/N measurements. Frequency resolution reaches 1 Hz across the entire band. Level accuracy is better than 1 dB, with total error less than ± 1 dB below 1.04 GHz and ± 1.5 dB above. The modulation generator operates from 1 Hz to 500 kHz and can function as a standalone AF source. RF sweep and IF sweep modes support production verification workflows. Built-in overvoltage protection and low RF leakage ($< 0.1 \mu\text{V}$) safeguard connected devices. Nonvolatile memory stores 100 complete front-panel setups. IEEE 488 / IEC 625 remote control enables integration into automated test systems. 50Ω output impedance with VSWR < 1.5 (≤ 1.04 GHz) and 1.04 GHz) ensures predictable system performance.

SMY02 Characteristics / Specifications

PARAMETER	VALUE
Model	SMY02
Manufacturer	Rohde & Schwarz
Instrument Type	Analog RF Signal Generator
Alias	R&S SMY02; 1062.5502.12
Frequency Range	9 kHz to 2080 MHz
Underrange	down to 5 kHz (not specified)
Frequency Resolution	1 Hz
Frequency Setting Time	less than 60 ms
Level Range Standard	minus 140 dBm to plus 13 dBm
Overrange Standard	up to plus 19 dBm (not specified)
Level Range SMY B	minus 134 dBm to plus 19 dBm
Overrange SMY B	up to plus 25 dBm, down to minus 140 dBm
Level Resolution	0.1 dB
Level Errorfless than 1.04 GHz levels greater than minus 127 dBm	less than plus/minus 1 dB
Level Errorfgreater than 1.04 GHz	less than plus/minus 1.5 dB
Level Flatness at 0 dBm	less than 1 dB, typically less than 0.3 dB
Output Impedance	50 ohm
VSWRfless than or equal to 1.04 GHz	less than 1.5
VSWRfgreater than 1.04 GHz	less than 1.8
Level Setting Time IEC	less than 25 ms (less than 10 ms electronic)
Noninterrupting Level Range	0 to minus 20 dB
Harmonics Standard levels less than 10 dBm	less than minus 30 dBc
Subharmonicsfless than or equal to 1.04 GHz	none
Subharmonicsfgreater than 1.04 GHz	less than minus 40 dBc

PARAMETER	VALUE
Nonharmonicsless than or equal to 1.04 GHz offset greater than 5 kHz	less than minus 70 dBc
Nonharmonicsfgreater than 1.04 GHz	less than minus 64 dBc
Broadband Noisefgreater than 65 MHz offset greater than 1 MHz 1 Hz	less than minus 140 dBc
SSB Phase Noise 1 GHz 20 kHz Offset 1 Hz CW	less than minus 114 dBc
SSB Phase Noise 2 GHz 20 kHz Offset	less than minus 108 dBc
Residual FM rms CCITTfequals 1 GHz	less than 10 Hz, typically 3 Hz
Residual AM rms 0.03 to 20 kHz	less than 0.02 percent
AM Depth	0 to 100 percent, resolution 0.1 percent
FM Max Deviation 1040 to 2080 MHz	20 MHz
FM Distortion 1 kHz	less than 0.3 percent, typically 0.1 percent
Phase Max Deviation 1040 to 2080 MHz	400 rad
Pulse On Off Standard	greater than 80 dB
Pulse Rise Fall Standard Typical	4 us
Pulse Rise Fall SMY B	less than 20 ns
Max Reverse RF SMY	50 W
Max DC Voltage	35 V
Max Pulse Load width less than 10 us	1 mWs or 150 V peak
Internal AF Generator	1 Hz to 500 kHz, resolution 0.1 Hz
AF THD 20 Hz to 100 kHz	less than 0.1 percent
AF Output	1 V peak plus/minus 1 percent
RF Sweep Step Duration	10 ms to 5 s
Stored Setups	100
Reference Aging Standard	1e-6 per year
OCXO SMY B1 Aging	less than 1e-9 per day
Mains	100/230 V or 120/220 V, 47 to 440 Hz, max 120 VA
Dimensions	435 mm x 147 mm x 460 mm

PARAMETER	VALUE
Weight	13 kg
RF Leakage	less than 0.1 uV
Remote	IEC 625 (IEEE 488) Notes Specs from the R&S SMY data sheet. SMY02 is 2080 MHz; SMY01 is 1040 MHz and 30 W reverse (not 50 W). SMY B40 changes harmonics, pulse speed, and level range and is factory/service retrofit only. Confirm B1/B10/B40 on the unit.
Bandwidth	2 MHz for FSK/telemetry

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
VSWR f greater than 1.04 GHz	less than 1.8
Level Setting Time IEC	less than 25 ms (less than 10 ms electronic)
Noninterrupting Level Range	0 to minus 20 dB
Harmonics Standard levels less than 10 dBm	less than minus 30 dBc
Specifications	
PARAMETER	VALUE
Model	SMY02
Manufacturer	Rohde & Schwarz
Instrument Type	Analog RF Signal Generator
Alias	R&S SMY02; 1062.5502.12
Frequency Range	9 kHz to 2080 MHz
Underrange	down to 5 kHz (not specified)
Frequency Resolution	1 Hz
Frequency Setting Time	less than 60 ms
Level Range Standard	minus 140 dBm to plus 13 dBm
Overrange Standard	up to plus 19 dBm (not specified)
Level Range SMY B40	minus 134 dBm to plus 19 dBm
Overrange SMY B40	up to plus 25 dBm, down to minus 140 dBm
Level Resolution	0.1 dB
Level Errorless than 1.04 GHz levels greater than minus 127 dBm: less than plus/minus 1 dB	
Specifications	
PARAMETER	VALUE
Level Errorfgreater than 1.04 GHz	less than plus/minus 1.5 dB
Level Flatness at 0 dBm	less than 1 dB, typically less than 0.3 dB

PARAMETER	VALUE
Output Impedance	50 ohm
VSWRfless than or equal to 1.04 GHz	less than 1.5
VSWRfgreater than 1.04 GHz	less than 1.8
Level Setting Time IEC	less than 25 ms (less than 10 ms electronic)
Noninterrupting Level Range	0 to minus 20 dB
Harmonics Standard levels less than 10 dBm	less than minus 30 dBc
Subharmonicsfless than or equal to 1.04 GHz	none
Subharmonicsfgreater than 1.04 GHz	less than minus 40 dBc

Nonharmonicsfless than or equal to 1.04 GHz offset greater than 5 kHz: less than minus 70 dBc
Nonharmonicsfgreater than 1.04 GHz: less than minus 64 dBc
Broadband Noisefgreater than 65 MHz offset greater than 1 MHz 1 Hz: less than minus 140 dBc
SSB Phase Noise 1 GHz 20 kHz Offset 1 Hz CW: less than minus 114 dBc
SSB Phase Noise 2 GHz 20 kHz Offset: less than minus 108 dBc

Specifications

PARAMETER	VALUE
Residual FM rms CCITTfequals 1 GHz	less than 10 Hz, typically 3 Hz
Residual AM rms 0.03 to 20 kHz	less than 0.02 percent
AM Depth	0 to 100 percent, resolution 0.1 percent
FM Max Deviation 1040 to 2080 MHz	20 MHz
FM Distortion 1 kHz	less than 0.3 percent, typically 0.1 percent
Phase Max Deviation 1040 to 2080 MHz	400 rad
Pulse On Off Standard	greater than 80 dB
Pulse Rise Fall Standard Typical	4 us
Pulse Rise Fall SMY B40	less than 20 ns
Max Reverse RF SMY02	50 W
Max DC Voltage	35 V

Max Pulse Load width less than 10 us: 1 mWs or 150 V peak

Specifications

PARAMETER	VALUE
Internal AF Generator	1 Hz to 500 kHz, resolution 0.1 Hz
AF THD 20 Hz to 100 kHz	less than 0.1 percent
AF Output	1 V peak plus/minus 1 percent

PARAMETER	VALUE
RF Sweep Step Duration	10 ms to 5 s
Stored Setups	100
Reference Aging Standard	1e-6 per year
OCXO SMY B1 Aging	less than 1e-9 per day
Mains	100/230 V or 120/220 V, 47 to 440 Hz, max 120 VA
Dimensions	435 mm x 147 mm x 460 mm
Weight	13 kg
RF Leakage	less than 0.1 uV
Remote	IEC 625 (IEEE 488)

Notes

Specs from the R&S SMY data sheet. SMY02 is 2080 MHz; SMY01 is 1040 MHz and 30 W reverse (not 50 W). SMY B40 changes harmonics, pulse speed, and level range and is factory/service retrofit only. Confirm B1/B10/B40 on the unit.

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 ·
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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.