

ROHDE & SCHWARZ

SMY02

The Rohde & Schwarz SMY02 is an economical, high-performance RF signal generator designed for testing AM, FM, and phase-modulated receivers, as well as for general-purpose component measurements. Spanning a frequency range of 9 kHz to 2.08 GHz, it offers 1 Hz frequency resolution, an integrated 1 Hz to 500 kHz modulation generator, and low SSB phase noise, making it ideal for lab, production, and service environments.

SPECIFICATIONS

Frequency

Minimum Frequency	9 kHz Hz
Maximum Frequency	2080 MHz Hz
Frequency Resolution	1 Hz
Frequency Settling Time	< 60 ms

Output

Maximum Output Power	+13 dBm (+19 dBm overrange) dBm
Output Power Range	-140 dBm to +13 dBm (+19 dBm overrange)
Phase Noise	-114 dBc/Hz

Modulation

Modulation	AM, FM, Phase modulation (ϕ M)
Sweep Modes	RF Sweep
AM Modulation Depth	0% to 99%
AM Frequency Range	10 Hz to 50 kHz
AM Distortion	< 1% (at 30% AM, 1 kHz), < 3% (at 80% AM, 1 kHz)
Phase Modulation Max Deviation	5 to 40 rad (carrier frequency dependent)
Phase Modulation Frequency Range	20 Hz to 20 kHz

General

Reference Oscillator	10 MHz TCXO (aging < 1×10^{-6} /year); optional OCXO (Option SMY-B1, aging < 1×10^{-9} /day)
Interfaces	IEC625 / IEEE-488 (GPIB)
Display	LED display for frequency, level, and modulation

Physical

Power Supply	100 V to 120 V / 200 V to 240 V ($\pm 10\%$), 47 Hz to 440 Hz, 75 VA
Dimensions (W×H×D)	435 mm × 147 mm × 350 mm mm
Weight	11.5 kg kg

Analog Modulation

AF Synthesizer/Modulation Generator Range	1 Hz to 500 kHz
FM-DC Maximum Deviation	1.6 MHz
FM Bandwidth	2 MHz
FM Stereo Channel Separation	50 dB

Amplitude Specifications

Non-interrupting Level Setting Range	20 dB
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System Connectivity and Interfaces

Sequence Function Control	SEQ input
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Reference Frequency

External Reference Input	10 MHz, 0.1 V to 2 V RMS, BNC female
Internal Reference Output	10 MHz, approx. 1 V RMS, BNC female

Environmental

Operating Temperature Range	0 °C to +55 °C
Storage Temperature Range	-40 °C to +70 °C

Spectral Purity

Harmonics	< -30 dBc (for levels ≤ 10 dBm)
Non-Harmonics Spurious	< -70 dBc (for f ≤ 1040 MHz, > 5 kHz offset), < -64 dBc (for f > 1040 MHz)
Subharmonics	< -40 dBc (for f > 1040 MHz)

RF Output

RF Output Impedance	50 ohms
RF Output VSWR	< 1.5 (for f ≤ 1040 MHz, level < 0 dBm), < 1.8 (for f > 1040 MHz, level < 0 dBm)
RF Output Connector	N female
Level Settling Time	< 20 ms (without attenuator switching)
Level Accuracy	< 1 dB (for levels > -127 dBm, f ≤ 1040 MHz), < 1.5 dB (for levels > -127 dBm, f > 1040 MHz)
Overload Protection	up to 50 W (from 50 ohm source), max 35 V DC

TECHNOLOGY

RF Analog Signal Generator

APPLICATIONS

Receiver testing, component measurements, VCO simulation, pager testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.