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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMY43 9KHz to 2.08GHz Signal Generator

Rohde & Schwarz SMY43 Signal Generator 9 kHz to 2.08 GHz The R&S SMY43 is the 2.08 GHz member of the SMY analog signal generator family, documented together with SMY01 and SMY02 in the official operating and service manuals (SMY01 252C / SMY02 252C / SMY43). Electrical RF performance follows the SMY02 row: 9 kHz to 2080 MHz, level minus 140 dBm to +13 dBm (minus 134 to +19 dBm with SMY-B40). Subharmonics appear only above 1.04 GHz (less than minus 40 dBc). SSB phase noise is less than minus 108 dBc (1 Hz) at 2 GHz, 20 kHz offset. The R&S SMY43 is the 2.08 GHz member of the SMY analog signal generator family, documented together with SMY01 and SMY02 in the official operating and service manuals (SMY01 252C / SMY02 252C / SMY43). Electrical RF performance follows the SMY02 row: 9 kHz to 2080 MHz, level minus 140 dBm to +13 dBm (minus 134 to +19 dBm with SMY-B40). Subharmonics appear only above 1.04 GHz (less than minus 40 dBc). SSB phase noise is less than minus 108 dBc (1 Hz) at 2 GHz, 20 kHz offset.



MODEL

Rohde & Schwarz SMY43

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMY43

LISTING

<https://aumictechlabs.com/products/smy43-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMY43 is a synthesized RF signal generator spanning 9 kHz to 2.08 GHz, engineered for component testing, receiver validation, and signal simulation across diverse

communication standards. The instrument delivers exceptional signal purity with SSB phase noise of -114 dBc/Hz at 1 GHz carrier frequency and 10 kHz offset, coupled with low residual FM and high spurious rejection. Output ranges from -140 dBm to +13 dBm, with optional boost to +25 dBm via the SMY-B40 module.

Technical Specifications

Frequency Performance

Frequency range: 9 kHz to 2.08 GHz

Frequency resolution: 1 Hz

Setting time: < 60 ms

Reference frequency standard (optional SMY-B1): aging of 1×10^{-6} /year after 30 days operation

Output Level

Output range: -140 dBm to +13 dBm

Overrange capability: +19 dBm standard; +25 dBm with optional SMY-B40

Output impedance: 50 Ω

Non-interrupting level setting available over 20 dB range

Modulation Capabilities

Modulation types: AM, FM, PM, Pulse Modulation

Internal modulation generator: 1 Hz to 500 kHz

Optional AF synthesizer (SMY-B2): 10 Hz to 100 kHz or 1 Hz to 500 kHz

FM deviation: up to 20 MHz for VCO simulation; 2 MHz bandwidth for FSK and telemetry applications

Stereo channel separation: 50 dB

External AM monitoring and channel switchover logic integrated

Signal Quality

SSB phase noise: -114 dBc/Hz (1 GHz carrier, 10 kHz offset)

Low residual FM and high spurious rejection

Modulation Input

Input impedance: 100 k Ω ; 600 Ω jumper-selectable

Key Features

Frequency resolution to 1 Hz enables precise tuning across nine decades

Dual LCD displays for real-time frequency, level, and modulation parameter monitoring

High-stability optional reference standard with 1×10^{-6} /year aging specification

AM, FM, and phase modulation with internal AF synthesis to 500 kHz

Typical Applications

RF component characterization and acceptance testing

Receiver sensitivity and selectivity measurement

Signal simulation for system-level validation

FSK and telemetry signal generation

VCO performance evaluation

Compatibility & Integration

IEEE 488 (IEC 625) IEC-Bus connector enables remote operation and integration into automated test systems.

Power supply accepts 100–120 V or 200–240 V AC at system frequencies of 47–440 Hz.

Features & description

From manufacturer datasheet

Features

- Same economical SMY feature set as SMY01/02 with the higher SMY02 frequency ceiling
- Optional SMY-B40 high-level path
- Optional SMY-B1 OCXO
- IEC IEEE bus programming
- Treat RF tables as SMY02 unless a unit-specific supplement states otherwise

Applications

- AM/FM/pulse receiver testing to 2.08 GHz
- Production and service RF stimulus
- Cellular / PMR IF and RF benches in the SMY price class
- EMC / EMS source through UHF into low microwave

SMY43 Characteristics / Specifications

PARAMETER	VALUE
Model	SMY43
Manufacturer	Rohde & Schwarz
Instrument Type	Analog signal generator
Alias	SMY 43; R&S SMY43
Frequency Range	9 kHz to 2.08 GHz (SMY02-equivalent per family manual)
Frequency Underrange	to 5 kHz without guaranteed specs
Frequency Setting Time	less than 60 ms (SMY family)
Level Range Standard	minus 140 dBm to +13 dBm
Level Range with SMY B	minus 134 dBm to +19 dBm
Level Overrange Standard	up to +19 dBm without guarantee
Level Resolution	0.1 dB
Harmonics Standard	less than minus 30 dBc at levels less than +10 dBm
Subharmonics to 1.04 GHz	none
Subharmonics above 1.04 GHz	less than minus 40 dBc
Nonharmonics to 1.04 GHz	less than minus 70 dBc (offset greater than 5 kHz)
Nonharmonics above 1.04 GHz	less than minus 64 dBc
Broadband Noise above 65 MHz	less than minus 140 dBc (1 Hz)
SSB Phase Noise at 1 GHz	less than minus 114 dBc (1 Hz) at 20 kHz
SSB Phase Noise at 2 GHz	less than minus 108 dBc (1 Hz) at 20 kHz
Residual FM at 1 GHz CCITT	less than 10 Hz, typ. 3 Hz
Residual AM 0.03 to 20 kHz	less than 0.02 percent
Reference Aging Standard	1e-6 per year
OCXO SMY B1 Aging	less than 1e-9 per day
Reference Output	10 MHz, 1 V rms EMF, 50 ohm
External Reference Input	5 or 10 MHz plus/minus 5e-6, 0.2 to 2 V rms

PARAMETER	VALUE
Sibling SMY01 Range	9 kHz to 1.04 GHz
Sibling SMY02 Range	9 kHz to 2.08 GHz
Family Manual	SMY01 / SMY02 / SMY43 operating and service set
Remote Interface	IEC IEEE bus Notes Specs from the R&S SMY01/SMY02 data sheet applied to SMY43 as documented in the combined SMY01/02/43 manuals. Confirm the faceplate model (43 versus 02) and SMY-B40 / B1 options. Ifaunit-specific supplement differs, the supplement wins.

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.

performance follows the SMY02 row: 9 kHz to 2080 MHz, level minus 140 dBm to +13 dBm (minus 134 to +19 dBm with SMY-B40). Subharmonics appear only above 1.04 GHz (less than minus 40 dBc). SSB phase noise is less than minus 108 dBc (1 Hz) at 2 GHz, 20 kHz offset.

- Applications
- AM/FM/pulse receiver testing to 2.08 GHz
 - Production and service RF stimulus
 - Cellular / PMR IF and RF benches in the SMY price class
 - EMC / EMS source through UHF into low microwave

- Key Features
- Same economical SMY feature set as SMY01/02 with the higher SMY02 frequency ceiling
 - Optional SMY-B40 high-level path
 - Optional SMY-B1 OCXO
 - IEC IEEE bus programming
 - Treat RF tables as SMY02 unless a unit-specific supplement states otherwise

Technical Specifications

Technical Specifications

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Model	SMY43
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SSB Phase Noise at 2 GHz	less than minus 108 dBc (1 Hz) at 20 kHz
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Reference Output	10 MHz, 1 V rms EMF, 50 ohm
External Reference Input	5 or 10 MHz plus/minus 5e-6, 0.2 to 2 V rms
Sibling SMY01 Range	9 kHz to 1.04 GHz
Sibling SMY02 Range	9 kHz to 2.08 GHz
Family Manual	SMY01 / SMY02 / SMY43 operating and service set
Remote Interface	IEC IEEE bus

Notes

Specs from the R&S SMY01/SMY02 data sheet applied to SMY43 as documented in the combined SMY01/02/43 manuals. Confirm the faceplate model (43 versus 02) and SMY-B40 / B1 options. Ifaunit-specific supplement differs, the supplement wins.

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