

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMA100A 6GHz Signal Generator

Rohde & Schwarz SMA100A Analog Signal Generator 9 kHz to 6 GHz The R&S SMA100A is a high-purity analog signal generator (base 1400.0000.02) with RF path SMA-B103/B103L (9 kHz to 3 GHz) or SMA-B106/B106L (9 kHz to 6 GHz). Level range is minus 145 dBm to +18 dBm (overrange to +28 dBm). SSB phase noise is typically minus 134 dBc at 1 GHz, 20 kHz offset (minus 139.5 dBc typ. with SMA-B22). Frequency setting is 0.01 Hz; settling is less than 1.2 ms (less than 450 μ s in list/fast-hop). AM, pulse, optional broadband FM/ ϕ M (B20/B22), LF generator to 1 MHz, and optional clock synthesizer B29 cover A&D, production, and metrology.

The R&S SMA100A is a high-purity analog signal generator (base 1400.0000.02) with RF path SMA-B103/B103L (9 kHz to 3 GHz) or SMA-B106/B106L (9 kHz to 6 GHz). Level range is minus 145 dBm to +18 dBm (overrange to +28 dBm). SSB phase noise is typically minus 134 dBc at 1 GHz, 20 kHz offset (minus 139.5 dBc typ. with SMA-B22). Frequency setting is 0.01 Hz; settling is less than 1.2 ms (less than 450 μ s in list/fast-hop). AM, pulse, optional broadband FM/ ϕ M (B20/B22), LF generator to 1 MHz, and optional clock synthesizer B29 cover A&D, production, and metrology.



MODEL

Rohde & Schwarz SMA100A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMA100A

LISTING

<https://aumictechlabs.com/products/sma100a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMA100A is a 6 GHz signal generator engineered for high-purity signal generation across aerospace, defense, communications, and R&D applications. It delivers exceptional phase noise performance, flexible modulation capabilities, and rapid frequency/level switching in a compact 2U form factor.

Technical Specifications

Frequency & Power Frequency range: 9 kHz to 6 GHz Output power: up to +18 dBm standard; overrange to +28 dBm in high-power mode Level setting range: -145 dBm to +13 dBm (≤ 3 GHz); -145 dBm to +9 dBm (> 3 GHz)

Signal Purity SSB phase noise: -141 dBc typical at 1 GHz (20 kHz offset, 1 Hz BW) Harmonic suppression: < -96 dBc (f 10 kHz offset) Wideband noise: -160 to -162 dBc at 1 GHz (> 40 MHz offset, 9 dBm level)

Frequency Stability & Switching High-stability reference oscillator standard Frequency setting: < 700 μ s typical; < 450 μ s in List mode Fast Hopping mode with flexible frequency/level pair addressing Direct DDS access: 80 dB on/off ratio (> 100 dB typical for $f < 5.5$ GHz); $< 7-10$ ns rise/fall Optional multifunction generator to 10 MHz; optional chirp and I/Q modulation (160 MHz BW) Internal LF generator to 1 MHz with multiple waveforms

Key Features

Integrated pulse generator (10 ns minimum pulse width optional) Optional clock synthesizer: low-jitter signals to 1.5 GHz differential output Electronic attenuator with overvoltage protection Optional VOR/ILS and DME modulation/analysis

Typical Applications Aerospace and defense system testing, RF communications development, microwave component characterization, radar and navigation system validation.

Compatibility & Integration GPIB, LAN, USB remote control. SCPI or legacy command emulation. Direct support for R&S NRP-Zxx power sensors. Browser and VNC remote operation.

Features & description

From manufacturer datasheet

Features

- High-stability reference oscillator as standard
- Electronic attenuator with overvoltage protection over the full range
- Two height units
- Optional SMA-B22 enhanced phase noise (nonharmonics less than minus 90 dBc class)
- Optional SMA-B29 low-jitter clock to 1.5 GHz

Applications

- High-purity LO substitution and receiver test
- Production ATE with list/fast-hop
- Analog AM/FM/ ϕ M/pulse including chirp (B20/B22)
- Avionics VOR/ILS/DME (K25/K26)
- NRP-Z power analysis and scalar NA (K28)

SMA100A Characteristics / Specifications

PARAMETER	VALUE
Model	SMA100A
Manufacturer	Rohde & Schwarz
Instrument Type	Analog RF signal generator
Alias	SMA 100A; R&S SMA100A
Order Number Base	1400.0000.02
Frequency Range B1	9 kHz to 3 GHz (electronic attenuator)
Frequency Range B103L B106L	9 kHz to 3/6 GHz without attenuator
Frequency Setting Resolution	0.01 Hz
Synthesis Resolution Standard	5 µHz nom. (750 to 1500 MHz)
Synthesis Resolution B	0.2 µHz nom.
Frequency Settling	less than 1.2 ms (no relay, PLL normal)
List Mode Settling	less than 450 µs
Level Range	minus 145 dBm to +18 dBm (overrange +28 dBm)
Level Settling	less than 1.5 ms
SSB Phase Noise at 1 GHz 20 kHz	less than minus 131 dBc, typ. minus 134 dBc (1 Hz)
SSB Phase Noise with B	less than minus 136 dBc, typ. minus 139.5 dBc (1 Hz)
Wideband Noise 750 to 1500 MHz	less than minus 153 dBc (offset greater than 10 MHz)
Nonharmonics to 1500 MHz	less than minus 80 dBc (offset greater than 10 kHz)
Nonharmonics with B	less than minus 90 dBc
Phase Offset Step	0.1 degree
LF Generator	to 1 MHz; SMA-K24 multifunction to 10 MHz
Pulse Modulation	standard class
FM PhiM Option	SMA-B20 1405.1605.02 or SMA-B22
Clock Synthesizer Option	SMA-B29 to 1.5 GHz
RF Option 3 GHz	SMA-B103 1405.0209.02

PARAMETER	VALUE
RF Option 6 GHz	SMA-B106 1405.0809.02
Form Factor	2 HU
Avionics Options	SMA-K25 VOR/ILS/ADF; SMA-K26 DME
Power Sensors	NRP-Zxx with optional K28 analysis Notes Specs from the R&S SMA100A Signal Generator data sheet. Confirm B103 vs B106 (orLversions without attenuator) and B20/B22. This is SMA100A, not SMA100B.

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	SMA100A
Manufacturer	Rohde & Schwarz
Instrument Type	Analog RF signal generator
Alias	SMA 100A; R&S SMA100A
Order Number Base	1400.0000.02
Frequency Range B103	9 kHz to 3 GHz (electronic attenuator)
Frequency Range B106	9 kHz to 6 GHz (electronic attenuator)
Frequency Range B103L B106L	9 kHz to 3/6 GHz without attenuator
Frequency Setting Resolution	0.01 Hz
Synthesis Resolution Standard	5 µHz nom. (750 to 1500 MHz)
Synthesis Resolution B22	0.2 µHz nom.
Frequency Settling	less than 1.2 ms (no relay, PLL normal)
List Mode Settling	less than 450 µs
Level Range	minus 145 dBm to +18 dBm (overrange +28 dBm)
Level Settling	less than 1.5 ms
SSB Phase Noise at 1 GHz 20 kHz: less than minus 131 dBc, typ. minus 134 dBc (1 Hz)	
Specifications	
PARAMETER	VALUE
SSB Phase Noise with B22	less than minus 136 dBc, typ. minus 139.5 dBc (1 Hz)
Wideband Noise 750 to 1500 MHz	less than minus 153 dBc (offset greater than 10 MHz)
Nonharmonics to 1500 MHz	less than minus 80 dBc (offset greater than 10 kHz)
Nonharmonics with B22	less than minus 90 dBc
Phase Offset Step	0.1 degree
LF Generator	to 1 MHz; SMA-K24 multifunction to 10 MHz
Pulse Modulation	standard class

PARAMETER	VALUE
FM PhiM Option	SMA-B20 1405.1605.02 or SMA-B22
Clock Synthesizer Option	SMA-B29 to 1.5 GHz
RF Option 3 GHz	SMA-B103 1405.0209.02
RF Option 6 GHz	SMA-B106 1405.0809.02
Form Factor	2 HU
Avionics Options	SMA-K25 VOR/ILS/ADF; SMA-K26 DME
Power Sensors	NRP-Zxx with optional K28 analysis

Notes
Specs from the R&S SMA100A Signal Generator data sheet. Confirm B103 vs B106 (or versions without attenuator) and B20/B22. This is SMA100A, not SMA100B.

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.