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Data Sheet

August 3, 2026

ROHDE & SCHWARZ

Rohde and Schwarz SGMA vector RF source, 1 MHz to 3 GHz RF

Rohde and Schwarz SGMA vector RF source, 1 MHz to 3 GHz RF The R&S SGMA vector RF source (R&S®SGT100A) provides a compact I/Q-modulated RF source with integrated baseband/ARB for production and automated test, covering 1 MHz to 3 GHz RF (optional extension to 6 GHz), with very fast frequency/level settling via PCIe and Ethernet. Automated production RF stimulus; MIMO enhancement alongside SMW200A-class instruments; digital-standard signal generation (5G, WLAN, etc.) with integrated ARB; high-throughput ATE requiring fast frequency and level switching in a half-rack 1 HU form factor. The R&S SGMA vector RF source (R&S®SGT100A) provides a compact I/Q-modulated RF source with integrated baseband/ARB for production and automated test, covering 1 MHz to 3 GHz RF (optional extension to 6 GHz), with very fast frequency/level settling via PCIe and Ethernet. Automated production RF stimulus; MIMO enhancement alongside SMW200A-class instruments; digital-standard signal generation (5G, WLAN, etc.) with integrated ARB; high-throughput ATE requiring fast frequency and level switching in a half-rack 1 HU form factor.



MODEL

Rohde & Schwarz SGMA

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SGMA

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz SGMA is a vector RF source spanning 1 MHz to 3 GHz, engineered for research, development, and production testing environments demanding complex signal generation. It delivers CW and I/Q modulation with internal baseband capability, frequency setting resolution to 0.001 Hz, and fast settling times under 500 μ s via PCIe control. The instrument combines low phase noise performance with flexible modulation bandwidth and optional pulse generation, supporting both internal and external signal sources for multi-faceted RF applications.

Technical Specifications

Frequency & Synthesis Frequency range (CW & I/Q internal): 1 MHz to 3 GHz Frequency setting resolution: 0.001 Hz Synthesis resolution at 1 GHz: 0.174 μ Hz (nominal) Setting time: < 500 μ s with PCIe remote control Signal Quality SSB phase noise at 1 GHz (20 kHz offset): < -126 dBc (-133 dBc measured) SSB phase noise at 2 GHz (20 kHz offset): < -120 dBc (-127 dBc measured) Nonharmonics: 10 kHz carrier offset, $\leq$ 1500 MHz, CW) Wideband noise: < -145 dBc (CW) Harmonics: < -30 dBc ($\leq$ 8 dBm output, CW) Output & Modulation Maximum output level (typical): +22 dBm I/Q modulation bandwidth: Up to 240 MHz Electronic attenuator: Wear-free design available Pulse modulation: Optional with R&S SGT-K22 (pulse delay range 0 s to 100 s, 10 ns resolution) Reference Output REF/LO output: 10 MHz or 1000 MHz (SMA female, rear panel) Output level: +6 dBm to +12 dBm

Key Features Frequency setting resolution to 0.001 Hz enables precise carrier tuning Fast PCIe-controlled frequency switching under 500 μ s Low phase noise across operating range supports sensitive receiver testing Optional internal pulse generator with external trigger capability (< 20 ns jitter) Configurable I/Q modulation with 240 MHz RF bandwidth External analog I/Q input option (R&S SGT-KB106) extends capability to 80 MHz minimum

Typical Applications Receiver sensitivity and selectivity characterization Transceiver development and validation Phase noise measurement and analysis Modulated signal generation for protocol testing Radar and pulse-based system evaluation

Compatibility & Integration PCIe remote control interface enables automated test sequences. Dual reference frequency outputs (10 MHz and 1000 MHz) support phase-locked operation with external instruments. USER2 connector provisions external pulse modulation and trigger outputs (LVTTTL, 3.3 V nominal).

Features & description

From manufacturer datasheet

Features

- SGMA vector RF source / R&S®SGT100A • Frequency 1 MHz to 3 GHz RF (base); optional 6 GHz (SGT-KB106) • Maximum level typically +22 dBm class • Wear-free electronic attenuator • Integrated ARB up to 1 Gsample memory and 240 MHz RF bandwidth (options) • Very fast frequency and level setting via PCIe and Ethernet • Compact: 1 HU, ½ 19-inch; SGMA-GUI multi-instrument control • Optional pulse modulation, AWGN, envelope tracking, phase-coherent I/O

SGMA Characteristics / Specifications

PARAMETER	VALUE
Model	SGMA / SGT100A (R&S®SGT100A)
Manufacturer	Rohde & Schwarz
Instrument Type	Vector RF Source / Vector Signal Generator
Frequency Range	1 MHz to 3 GHz (base catalog configuration)
Max Level	typically +22 dBm
ARB Bandwidth	up to 240 MHz (option)
Form Factor	1 HU, ½ 19-inch
Order Class (3 GHz)	R&S®SGT100A 1419.4501.02
Alias	SGMA, SGT100A Standard Operating Conditions Use SGMA-GUI or SCPI over Ethernet/PCIe for automated control. Confirm 3 GHz vs 6 GHz frequency option before quoting range. Observe RF output ratings into the DUT. Operational Notes
Compact	1 HU, ½ 19-inch; SGMA-GUI multi-instrument control
Bandwidth	(options) - Very fast frequency and level setting via PCIe and Ethernet - Compact: 1 HU, ½ 19-inch; SGMA-GUI multi-instrument control - Optional pulse modulation, AWGN, envelope tracking, phase-coherent I/O

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	SGMA / SGT100A (R&S®SGT100A)
Manufacturer	Rohde & Schwarz
Instrument Type	Vector RF Source / Vector Signal Generator
Frequency Range	1 MHz to 3 GHz (base catalog configuration)

Optional Frequency: to 6 GHz

Specifications

PARAMETER	VALUE
Max Level	typically +22 dBm
ARB Bandwidth	up to 240 MHz (option)
Form Factor	1 HU, ½ 19-inch
Order Class (3 GHz)	R&S®SGT100A 1419.4501.02
Alias	SGMA, SGT100A

Standard Operating Conditions

Use SGMA-GUI or SCPI over Ethernet/PCIe for automated control. Confirm 3 GHz vs 6 GHz frequency option before quoting range. Observe RF output ratings into the DUT.

Operational Notes

Catalog title “SGMA vector RF source, 1 MHz to 3 GHz RF” corresponds to the R&S®SGT100A SGMA product-confirm SGT100A faceplate. Alias SGMA / SGT100A.

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

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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.