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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMF100A 22GHz Signal Generator

Rohde & Schwarz SMF100A Microwave Signal Generator 100 kHz to 43.5 GHz The R&S SMF100A is a microwave analog signal generator (base 1167.0000.02). RF options set the ceiling: SMF-B122 (1 GHz to 22 GHz), SMF-B131 (1 GHz to 31.8 GHz), or SMF-B144/B144N (1 GHz to 43.5 GHz). SMF-B2 extends the start to 100 kHz. Specified SSB phase noise is less than minus 115 dBc (typ. minus 120 dBc) at 10 GHz, 10 kHz offset. Setting times are less than 4 ms (frequency) and less than 3 ms (level); list mode is typically less than 700 μ s. Optional SMF-B20 analog modulation, pulse (K3), enhanced phase noise (B22), and high power (B32/B34) cover A&D and production. The R&S SMF100A is a microwave analog signal generator (base 1167.0000.02). RF options set the ceiling: SMF-B122 (1 GHz to 22 GHz), SMF-B131 (1 GHz to 31.8 GHz), or SMF-B144/B144N (1 GHz to 43.5 GHz). SMF-B2 extends the start to 100 kHz. Specified SSB phase noise is less than minus 115 dBc (typ. minus 120 dBc) at 10 GHz, 10 kHz offset. Setting times are less than 4 ms (frequency) and less than 3 ms (level); list mode is typically less than 700 μ s. Optional SMF-B20 analog modulation, pulse (K3), enhanced phase noise (B22), and high power (B32/B34) cover A&D and production.



MODEL

Rohde & Schwarz SMF100A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMF100A

LISTING

<https://aumictechlabs.com/products/smf100a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMF100A is a versatile signal generator designed for generating complex and precise signals. Its frequency range extends up to 22 GHz, and it delivers outstanding signal purity with low phase noise and spurious emissions. The SMF100A supports a wide range of modulation formats, including AM, FM, PM, and pulse modulation. This makes it ideal for generating signals for testing receivers, simulating radar systems, and characterizing RF components.

Features & description

From manufacturer datasheet

Features

- Frequency setting 0.001 Hz
- Optional SMF-B1 OCXO
- Step attenuators SMF-B26 (to 22 GHz) or SMF-B27 (to 43.5 GHz)
- Compact 3 HU rack height
- Typical output to +25 dBm class with high-power options

Applications

- Microwave component, radar, and EW stimulus to 22/31.8/43.5 GHz
- Production ATE with list-mode hops
- Analog AM/FM/φM/pulse (options)
- High-power microwave source (B32/B34)
- Scalar measurements with NRP sensors

SMF100A Characteristics / Specifications

PARAMETER	VALUE
Model	SMF100A
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave analog signal generator
Alias	SMF 100A; R&S SMF100A
Order Number Base	1167.0000.02
Frequency Range B1	1 GHz to 31.8 GHz
Frequency Extension B	100 kHz to 1 GHz
Frequency Setting Resolution	0.001 Hz
Frequency Settling	less than 4 ms
List Mode Settling	typically less than 700 μ s
Level Setting Range	minus 130 dBm to +30 dBm class
Level Settling	less than 3 ms
SSB Phase Noise at 10 GHz 10 kHz	less than minus 115 dBc, typ. minus 120 dBc (1 Hz)
SSB Phase Noise at 1 GHz 20 kHz	less than minus 132 dBc (1 Hz)
SSB Phase Noise at 10 GHz 20 kHz	less than minus 115 dBc (1 Hz)
SSB Phase Noise at 40 GHz 20 kHz	less than minus 103 dBc (1 Hz)
Reference Aging per Day	less than 1e-8 (after 30 days)
Reference Aging per Year	less than 1e-6
Modulation Analog	AM, FM, phiM, pulse (options)
Form Factor	3 HU microwave generator
Typical High Power	up to typ. +25 dBm (option) Notes Specs from the R&S SMF100A Microwave Signal Generator data sheet. Confirm B122 vs B131 vs B144, B2 low-frequency extension, attenuator, and modulation options. This is SMF100A, not SMF100B.

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	SMF100A
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave analog signal generator
Alias	SMF 100A; R&S SMF100A
Order Number Base	1167.0000.02
Frequency Range B122	1 GHz to 22 GHz
Frequency Range B131	1 GHz to 31.8 GHz
Frequency Range B144	1 GHz to 43.5 GHz
Frequency Extension B2	100 kHz to 1 GHz
Frequency Setting Resolution	0.001 Hz
Frequency Settling	less than 4 ms
List Mode Settling	typically less than 700 µs
Level Setting Range	minus 130 dBm to +30 dBm class
Level Settling	less than 3 ms
SSB Phase Noise at 10 GHz 10 kHz: less than minus 115 dBc, typ. minus 120 dBc (1 Hz)	
SSB Phase Noise at 1 GHz 20 kHz: less than minus 132 dBc (1 Hz)	
SSB Phase Noise at 10 GHz 20 kHz: less than minus 115 dBc (1 Hz)	
SSB Phase Noise at 40 GHz 20 kHz: less than minus 103 dBc (1 Hz)	
Reference Aging per Day: less than 1e-8 (after 30 days)	
Reference Aging per Year: less than 1e-6	
Option SMF B122: 1167.7004.03, 3.5 mm female adapter	
Option SMF B131: 1167.7140.02, 2.9 mm female adapter	
Option SMF B144: 1167.7204.03, 2.4 mm and 2.9 mm adapters	
Option SMF B2: 1167.4005.02 frequency extension	
Option SMF B1: OCXO 1167.9159.02	
Option SMF B20: AM/FM/phiM/LOG AM 1167.9594.02	
Option SMF B22: enhanced phase noise 1415.2204.02	
Option SMF B26: step attenuator to 22 GHz	
Option SMF B27: step attenuator to 43.5 GHz	
Option SMF B32: high output power (not with B2)	
Specifications	
PARAMETER	VALUE
Modulation Analog	AM, FM, phiM, pulse (options)

PARAMETER	VALUE
Form Factor	3 HU microwave generator
Typical High Power	up to typ. +25 dBm (option)

Notes

Specs from the R&S SMF100A Microwave Signal Generator data sheet. Confirm B122 vs B131 vs B144, B2 low-frequency extension, attenuator, and modulation options. This is SMF100A, not SMF100B.

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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.