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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMP02 Signal Generator, 10MHz to 20GHz

Rohde & Schwarz SMP02 Microwave Signal Generator 10 MHz to 20 GHz The R&S SMP02 is the standard-power 20 GHz member of the SMP family. Standard range is 2 GHz to 20 GHz; option SMP-B11 extends the lower limit to 10 MHz (hence the common listing "10 MHz to 20 GHz"). Specified output is greater than +11.5 dBm at 20 GHz and greater than +17 dBm from 10 MHz to 2 GHz (without pulse-modulator options). Frequency resolution is 0.1 Hz. SSB phase noise is less than minus 105 dBc (1 Hz) at 10 GHz, 10 kHz offset. The high-power sibling is SMP22 (greater than +20 dBm). The R&S SMP02 is the standard-power 20 GHz member of the SMP family. Standard range is 2 GHz to 20 GHz; option SMP-B11 extends the lower limit to 10 MHz (hence the common listing "10 MHz to 20 GHz"). Specified output is greater than +11.5 dBm at 20 GHz and greater than +17 dBm from 10 MHz to 2 GHz (without pulse-modulator options). Frequency resolution is 0.1 Hz. SSB phase noise is less than minus 105 dBc (1 Hz) at 10 GHz, 10 kHz offset. The high-power sibling is SMP22 (greater than +20 dBm).



MODEL

Rohde & Schwarz SMP02

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMP02

LISTING

<https://aumictechlabs.com/products/smp02-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMP02 signal generator can meet the demanding requirements of modern RF testing. With a frequency range of 10MHz to 20GHz, It has a broad spectrum of signals for

various applications. Its advanced modulation capabilities include AM, FM, PM, and pulse modulation, allowing for comprehensive signal simulation. The SMP02 features low phase noise and high output power, ensuring accurate and reliable signal generation. Its intuitive user interface and comprehensive remote control options make it easy to integrate into automated test systems. The SMP02 is an ideal solution for RF engineers and technicians who require a signal generator for their daily tasks.

Features & description

From manufacturer datasheet

Features

- YIG oscillators to 20 GHz without frequency multiplication (no subharmonics) • AM DC to 100 kHz, FM DC to 5 MHz, optional phase DC to 100 kHz • Optional pulse modulator, on/off greater than 80 dB • Digital RF, AF and level sweep; 50 stored setups • Frequency setting less than 11 ms + 5 ms/GHz

Applications

- General-purpose 20 GHz CW, sweep, and pulse stimulus • Radar receiver tests with optional pulse modulator • Scalar network / spectrum analyzer tracking source • LO substitution and mixer drive • EMC work when B11 opens 10 MHz to 2 GHz

SMP02 Characteristics / Specifications

PARAMETER	VALUE
Model	SMP02
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMP 02; R&S SMP02
Frequency Range Standard	2 GHz to 20 GHz
Frequency Range with SMP B	10 MHz to 20 GHz
Frequency Resolution	0.1 Hz
Frequency Setting Time	less than 11 ms + 5 ms/GHz
Maximum Level 2 GHz to 20 GHz	greater than +11.5 dBm
Maximum Level 10 MHz to 2 GHz	greater than +17 dBm
Maximum Level with SMP B15 2 to 20 GHz	greater than +10 dBm class
Level Accuracy at 0 dBm	less than plus/minus 0.9 dB, 10 MHz to 40 GHz family
SSB Phase Noise at 10 GHz	less than minus 105 dBc (1 Hz) at 10 kHz offset
Harmonics below 1.8 GHz	less than minus 30 dBc (at less than +8 dBm)
Harmonics above 1.8 GHz	less than minus 40 dBc (at less than +10 dBm)
Subharmonics to 20 GHz	none
Nonharmonics 2 to 20 GHz	less than minus 60 dBc
AM Bandwidth	DC to 100 kHz
FM Bandwidth	DC to 5 MHz
Phase Modulation Bandwidth	DC to 100 kHz (option)
Pulse On Off Ratio	greater than 80 dB
Pulse Rise Fall	less than 10 ns
Phase Offset Step	1 degree
Reference Aging Standard	1e-6 per year
Reference Aging OCXO SMP B	less than 1e-7 per year

PARAMETER	VALUE
Reference Output	10 MHz, 1 V rms EMF, 50 ohm
External Reference Input	1 MHz to 16 MHz in 1 MHz steps, 0.1 to 2 V rms, 200 ohm
Stored Setups	50
Pulse Modulator Options	SMP-B12 2 to 20 GHz; SMP-B13 0.01 to 2 GHz
Attenuator Option	SMP-B15
RF Connector Class	precision 3.5 mm family (confirm on unit) Notes Specs from the R&S SMP data sheet. This file is the standard-power SMP02, not the high-power SMP22. Confirm SMP-B11 (required for true 10 MHz low end), attenuator, and pulse options.
Bandwidth	DC to 100 kHz

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	
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PARAMETER	VALUE
Model	SMP02
Manufacturer	Rohde & Schwarz
Instrument Type	Microwave signal generator
Alias	SMP 02; R&S SMP02
Frequency Range Standard	2 GHz to 20 GHz
Frequency Range with SMP B11	10 MHz to 20 GHz
Frequency Resolution	0.1 Hz
Frequency Setting Time	less than 11 ms + 5 ms/GHz
Maximum Level 2 GHz to 20 GHz	greater than +11.5 dBm
Maximum Level 10 MHz to 2 GHz	greater than +17 dBm
Maximum Level with SMP B15 2 to 20 GHz: greater than +10 dBm class	
Specifications	
PARAMETER	VALUE
Level Accuracy at 0 dBm	less than plus/minus 0.9 dB, 10 MHz to 40 GHz family
SSB Phase Noise at 10 GHz	less than minus 105 dBc (1 Hz) at 10 kHz offset
Harmonics below 1.8 GHz	less than minus 30 dBc (at less than +8 dBm)
Harmonics above 1.8 GHz	less than minus 40 dBc (at less than +10 dBm)
Subharmonics to 20 GHz	none
Nonharmonics 2 to 20 GHz	less than minus 60 dBc
AM Bandwidth	DC to 100 kHz
FM Bandwidth	DC to 5 MHz
Phase Modulation Bandwidth	DC to 100 kHz (option)
Pulse On Off Ratio	greater than 80 dB
Pulse Rise Fall	less than 10 ns
Phase Offset Step	1 degree

PARAMETER	VALUE
Reference Aging Standard	1e-6 per year
Reference Aging OCXO SMP B1	less than 1e-7 per year
Reference Output	10 MHz, 1 V rms EMF, 50 ohm
External Reference Input	1 MHz to 16 MHz in 1 MHz steps, 0.1 to 2 V rms, 200 ohm
Stored Setups	50
Pulse Modulator Options	SMP-B12 2 to 20 GHz; SMP-B13 0.01 to 2 GHz
Attenuator Option	SMP-B15
RF Connector Class	precision 3.5 mm family (confirm on unit)

Notes

Specs from the R&S SMP data sheet. This file is the standard-power SMP02, not the high-power SMP22. Confirm SMP-B11 (required for true 10 MHz low end), attenuator, and pulse options.

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.