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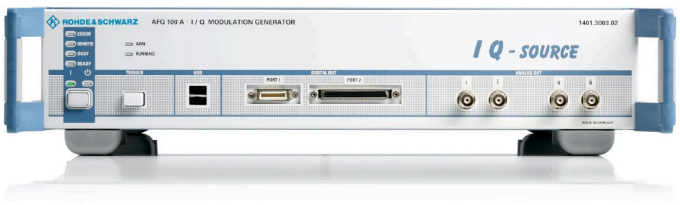
Data Sheet
August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz AFQ100A I/Q Modulation Generator

Digital Port 2 Interface: 68 pin HD SCSI, 16 bitlandQLVDS Dimensions: 426.7 mm x 87.6 mm x 450 mm class Sibling AFQ100B: Mode 2 600 MHz clock / 528 MHz RF; B12 memory; B10 not used Specs from R&S AFQ100A/B specifications PD 5214.0799.22. AFQ-B10 256 Msample is AFQ100A only. Confirm installed memory and digital I/Q option. This file is AFQ100A, not the UWB AFQ100B. Rohde & Schwarz AFQ100A I/Q Modulation Generator The R&S AFQ100A (order 1401.3003.02) is the communications-oriented I/Q modulation generator. Memory clock is 1 kHz to 300 MHz for 200 MHz RF bandwidth. Waveform memory is AFQ-B10 up to 256 Msample (AFQ100A only) or AFQ-B11 up to 1 Gsample. Sixteen bit data words, balanced and unbalanced analog I/Q, optional digital I/Q (AFQ-B18), and WinIQSIM2 options for WiMAX, LTE, and HSPA support MCPA linearity, BER, and broadband communications. Sibling AFQ100B adds Mode 2 (600 MHz clock, 528 MHz RF bandwidth) for UWB.



MODEL Rohde & Schwarz AFQ100A	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU AFQ100A	LISTING https://aumictechlabs.com/products/afq100a-2/

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz AFQ100A is an I/Q modulation generator designed to create complex modulated signals for research, development, and production testing. It delivers high-precision

arbitrary waveform generation with flexible modulation capabilities, extensive memory options, and integrated equalization and precorrection features. The instrument supports signal durations up to 1 Gsample and enables rapid test throughput through multisegment waveform switching.Technical Specifications Signal Generation Memory clock rate: 1 kHz to 300 MHz I/Q bandwidth: Up to 100 MHz RF bandwidth: 200 MHz Waveform memory: Up to 256 Msamples (R&S®AFQ-B10) or up to 1 Gsample (R&S®AFQ-B11) Pure sine wave source output: Up to 100 MHz I/Q skew adjustment: 10 ps resolution Spurious-free dynamic range (SFDR): Typically 83 dBc at 1 MHz signal, 100 MHz bandwidth Frequency response: Typically 0.05 dB across 100 MHz I/Q bandwidth Advanced Signal Control Independent I and Q gain and offset settings Phase error generation DC offset biasing on differential I/Q outputs Loadable precorrection for external component compensation Frequency response compensation Multisegment waveform capabilityKey Features Arbitrary waveform generation with long signal duration capability I/Q impairment generation for realistic testing scenarios Digital I/Q output option (R&S®AFQ-B18) Pulse sequencer support (R&S®AFQ-K6 option)Software & Integration R&S®WinIQSIM2™ for standards-based signal creation (WiMAX, LTE, HSPA) MATLAB® Transfer Toolbox integration ARB Toolbox for I/Q data conversion Remote control via GPIB, USB, and LAN Windows XP Remote Desktop interface support

AFQ100A Characteristics / Specifications

PARAMETER	VALUE
Model	AFQ100A
Manufacturer	Rohde & Schwarz
Instrument Type	I/Q modulation generator
Alias	R&S AFQ100A; AFQ 100A
Order Number	1401.3003.02
Memory Clock	1 kHz to 300 MHz
RF Bandwidth	200 MHz
Waveform Bandwidth	max 0.33 times memory clock
Waveform Length	from 3 samples in steps of 1
Memory AFQ B	up to 256 Msample (AFQ100A only)
Amplitude Resolution	16 bit analog and digital (AFQ B18)
Marker Channels	4
Marker Offset	0 sample to 2000 sample
Converter Clock	1200 MHz with digital lowpass and clock rate converter
Clock Resolution	1e-7
Clock Output Level	LVTTL, 2 V into 50 ohm
External Clock Input Frequency	1 kHz to 300 MHz
External Clock Impedance	50 ohm or 1 kOhm switchable
Reference Frequency	10 MHz
Reference Aging	1e-6 per year after 30 days
Reference Temperature Effect	1e-6 from +5 C to +45 C
Unbalanced Level Nominal	1 Vpp into 50 ohm
Unbalanced Level Range	0 V to 1.5 Vpp into 50 ohm
Balanced Level Nominal	2 Vpp betweenland Ibar into 100 ohm
Balanced Level Range	0 V to 3 Vpp into 100 ohm

PARAMETER	VALUE
Hardware Attenuator	0 dB to 21 dB in 3 dB steps
Pulse Rise Fall	6 ns (10 percent / 90 percent)
Frequency Response to 50 MHz	plus/minus 0.05 dB relative to DC
Frequency Response to 100 MHz	plus/minus 0.1 dB relative to DC
SFDR without Harmonics	greater than 80 dBc, typically 83 dBc
Harmonics 10 MHz 1 Vpp	less than minus 70 dBc, typically minus 75 dBc
I/Q Skew	minus 2 ns to +2 ns in 10 ps steps
Residual DC Offset	less than plus/minus 1 mV after auto alignment
Bias Voltage	minus 2.5 V to +2.5 V in 10 mV steps
Trigger Inputs	TRIG and NEXT, BNC, min pulse 10 ns
Segment Mode	up to 2048 segments
Digital Port 2 Interface	68 pin HD SCSI, 16 bitlandQLVDS
Mains	100 V to 240 V AC, 50 Hz to 60 Hz
Dimensions	426.7 mm x 87.6 mm x 450 mm class
Operating Temperature	+5 C to +45 C
Calibration Interval	3 years
Sibling AFQ100B	Mode 2 600 MHz clock / 528 MHz RF; B12 memory; B10 not used Notes Specs from R&S AFQ100A/B specifications PD 5214.0799.22. AFQ-B10 256 Msample is AFQ100A only. Confirm installed memory and digital I/Q option. This file is AFQ100A, not the UWB AFQ100B.
Bandwidth	200 MHz

General Specifications & Supplementary Characteristics

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Operating temperature	+5 C to +45 C
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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	AFQ100A
Manufacturer	Rohde & Schwarz
Instrument Type	I/Q modulation generator

Specifications

PARAMETER	VALUE
Alias	R&S AFQ100A; AFQ 100A
Order Number	1401.3003.02
Memory Clock	1 kHz to 300 MHz

Specifications

PARAMETER	VALUE
RF Bandwidth	200 MHz
Waveform Bandwidth	max 0.33 times memory clock
Waveform Length	from 3 samples in steps of 1

Specifications

PARAMETER	VALUE
Memory AFQ B10	up to 256 Msample (AFQ100A only)
Memory AFQ B11	up to 1 Gsample
Amplitude Resolution	16 bit analog and digital (AFQ B18)

Specifications

PARAMETER	VALUE
Marker Channels	4
Marker Offset	0 sample to 2000 sample
Converter Clock	1200 MHz with digital lowpass and clock rate converter

Specifications

PARAMETER	VALUE
Clock Resolution	1e-7
Clock Output Level	LVTTL, 2 V into 50 ohm
External Clock Input Frequency	1 kHz to 300 MHz

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External Clock Impedance	50 ohm or 1 kOhm switchable
Reference Frequency	10 MHz
Reference Aging	1e-6 per year after 30 days

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Reference Temperature Effect	1e-6 from +5 C to +45 C
Unbalanced Level Nominal	1 Vpp into 50 ohm
Unbalanced Level Range	0 V to 1.5 Vpp into 50 ohm

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Pulse Rise Fall	6 ns (10 percent / 90 percent)
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SFDR without Harmonics	greater than 80 dBc, typically 83 dBc
Harmonics 10 MHz 1 Vpp	less than minus 70 dBc, typically minus 75 dBc
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Residual DC Offset	less than plus/minus 1 mV after auto alignment
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PARAMETER	VALUE
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PARAMETER	VALUE
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Operating Temperature	+5 C to +45 C
Calibration Interval	3 years

Sibling AFQ100B: Mode 2 600 MHz clock / 528 MHz RF; B12 memory; B10 not used

Notes

Specs from R&S AFQ100A/B specifications PD 5214.0799.22. AFQ-B10 256 Msample is AFQ100A only. Confirm installed memory and digital I/Q option. This file is AFQ100A, not the UWB AFQ100B.

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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