

ROHDE & SCHWARZ

FSW67

The Rohde & Schwarz FSW67 is a high-performance signal and spectrum analyzer designed to meet the most demanding requirements in aerospace, defense, and 5G communications. Operating over a wide frequency range from 2 Hz to 67 GHz, it provides industry-leading phase noise, high dynamic range, and a massive analysis bandwidth to deliver unparalleled measurement speed and precision.

SPECIFICATIONS

General

Interfaces	LAN (10/100/1000Base-T), USB 2.0 (2 ports), USB 3.0 (2 ports), GPIB (optional R&S®FSW-B10), DVI-D, DisplayPort
Display	12.1" WXGA color TFT touchscreen (1280 x 800 pixels)
Display Screen Size	12.1 in
Display Resolution	1280 × 800 pixels (WXGA)
Operating System	Windows 10 IoT Enterprise
Storage Drive	Solid-state drive (SSD), removable

Physical

Power Supply	100 V to 240 V AC (±10%), 50 Hz to 60 Hz / 400 Hz
Operating Temperature	+5 °C to +50 °C °C
Dimensions (W×H×D)	462 mm × 240 mm × 504 mm mm

Frequency Specifications

Frequency Range	2 Hz to 67 GHz
Frequency Resolution	0.01 Hz
Internal Reference Frequency Aging Rate	1 × 10 ⁻⁷ per year (standard); 3 × 10 ⁻⁸ per year (with R&S®FSW-B4 option)
Internal Reference Frequency Temperature Stability	1 × 10 ⁻⁷ (+5 °C to +50 °C); 1 × 10 ⁻⁹ (with R&S®FSW-B4 option)
Frequency Span Range	0 Hz (zero span), 10 Hz to 67 GHz
Frequency Span Accuracy	±0.1%

Spectral Purity and Noise

Phase Noise at 10 kHz Offset (1 GHz carrier)	<-137 dBc (1 Hz) (typical -140 dBc (1 Hz))
System Displayed Average Noise Level (DANL) without Preamplifier at 1 GHz	<-152 dBm (1 Hz)

Amplitude and Dynamic Range Specifications

Maximum Safe RF Input Level (Power)	+30 dBm (1 W)
Maximum Safe DC Input Voltage	0 V
1 dB Gain Compression Point at 1 GHz	+15 dBm (typical)
Input Attenuator Range	0 dB to 79 dB
Input Attenuator Steps	1 dB

Bandwidth (RBW / VBW)

Resolution Bandwidth (RBW) Range	1 Hz to 10 MHz
Resolution Bandwidth (RBW) Steps	1, 2, 3, 5, 10
Resolution Bandwidth (RBW) Shape Factor (60dB/3dB)	< 5 (Gaussian filters)
Video Bandwidth (VBW) Range	1 Hz to 10 MHz

Sweep and Trigger

Sweep Time Range (Span > 0)	1 μ s to 16000 s
Sweep Time Range (Zero Span)	100 ns to 16000 s
Sweep Trigger Sources	Free Run, External, Video, IF Power, RF Power, I/Q Power
Number of Sweep Points	101 to 100,001

Measurement and Detection Functions

Detector Types	Max Peak, Min Peak, Auto Peak, Sample, RMS, Average, Quasi-Peak
Trace Functions	Clear/Write, Max Hold, Min Hold, Average, View, Blank
Number of Concurrent Traces	6
Standard Measurement Suites	Channel Power, ACPR, OBW, SEM, TOI, Harmonic Distortion

RF Inputs and Outputs

RF Input Connector Type	1.85 mm ruggedized male (50 Ω)
RF Input Impedance	50 Ω
External Reference Input Frequency	1 MHz to 20 MHz (in 1 Hz steps)
External Reference Output Frequency	10 MHz

Environmental and Standards Compliance

Storage Temperature Range	-40 °C to +70 °C
Maximum Operating Altitude	up to 4600 m
Product Safety Standards	IEC 61010-1, EN 61010-1, UL 61010-1, CAN/CSA-C22.2 No. 61010-1
Recommended Calibration Cycle	1 year

Performance

Standard Analysis Bandwidth	28 MHz
Maximum Analysis Bandwidth	8.3 GHz (with option R&S FSW-B8001)
Maximum Real-Time Bandwidth	800 MHz (with option R&S FSW-K800R)
DANL with Preamplifier at 1 GHz	-166 dBm (typical, 1 Hz RBW, with option R&S FSW-B24)
DANL with Preamplifier at 67 GHz	-162 dBm (typical, 1 Hz RBW, with option R&S FSW-B24)
Total Measurement Uncertainty at 1 GHz	0.27 dB
Image Rejection	> 90 dB
IF Rejection	> 90 dB

Preamplifier

Preamplifier Frequency Range (Option FSW-B24)	100 kHz to 67 GHz
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Analysis Bandwidth

Maximum Analysis Bandwidth Option	Up to 8.3 GHz (with Option FSW-B8001)
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Compliance

EMC Standards	IEC/EN 61326-1, IEC/EN 61326-2-1, CISPR 11/EN 55011 Class A
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TECHNOLOGY

Signal & Spectrum Analysis

APPLICATIONS

Aerospace and defense, satellite communications, 5G/6G research, radar testing, wideband signal analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.