

ROHDE & SCHWARZ

FSU67

The Rohde & Schwarz FSU67 is a high-performance spectrum analyzer designed for demanding RF, microwave, and millimeter-wave applications, offering an exceptional direct frequency range from 20 Hz up to 67 GHz. Utilizing fundamental mixing over its entire frequency span, it eliminates the need for external harmonic mixers, thereby simplifying test setups and avoiding image and multiple responses. With its wide resolution bandwidth, low noise floor, high display linearity, and a comprehensive suite of measurement functions, the FSU67 provides outstanding accuracy and speed for advanced signal analysis.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488.2), LAN (10/100 Base-T), USB 2.0, VGA, RS-232, PS/2
Display	21 cm (8.4") TFT color SVGA LCD, 800 x 600 pixels

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 60 Hz / 400 Hz
Operating Temperature	5 °C to 40 °C °C
Dimensions (W×H×D)	435 mm × 192 mm × 460 mm mm

Frequency Specifications

Frequency Range	20 Hz to 67 GHz
Frequency Resolution	0.01 Hz
Frequency Span Range	0 Hz (zero span), 10 Hz to 67 GHz
Frequency Span Accuracy	0.1%
Reference Frequency Aging Rate	1 x 10 ⁻⁷ per year (standard); 2 x 10 ⁻⁹ per year (with Option FSU-B4)
Reference Frequency Temperature Stability	1 x 10 ⁻⁶ (standard, +5 °C to +45 °C); 1 x 10 ⁻⁹ (with Option FSU-B4)
Marker Frequency Counter Resolution	0.1 Hz to 10 kHz (selectable)

Spectral Purity and Noise

Residual FM	< 1 Hz (rms) in 0.1 s
System Displayed Average Noise Level (DANL) at 2 GHz	-152 dBm (1 Hz)

Amplitude and Dynamic Range Specifications

Amplitude Measurement Range	DANL to +30 dBm
Maximum Safe RF Input Level (Power)	+30 dBm (1 W)
Maximum Safe DC Input Voltage	0 V
Third-Order Intercept Point (TOI)	> 20 dBm (typical, at 2 GHz)
Input Attenuator Range	0 dB to 75 dB
Input Attenuator Steps	5 dB
Display Linearity	< 0.1 dB
Reference Level Range	-130 dBm to +30 dBm

Bandwidth (RBW / VBW)

Resolution Bandwidth (RBW) Range	1 Hz to 50 MHz
Resolution Bandwidth (RBW) Steps	1, 2, 3, 5 sequence
FFT Filter Range	1 Hz to 30 kHz
Channel Filter Range	100 Hz to 5 MHz
Video Bandwidth (VBW) Range	1 Hz to 10 MHz
Video Bandwidth (VBW) Steps	1, 2, 3, 5 sequence
Filter Types	Gaussian, Flat-top, EMI (6 dB), Channel, FFT

Sweep and Trigger

Sweep Time Range (Span > 0)	2.5 ms to 16000 s
Sweep Time Range (Zero Span)	1 μ s to 16000 s
Sweep Trigger Sources	Free Run, Video, External, Line, IF Power
Number of Sweep Points	155 to 30001 (selectable)

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	3
Standard Measurement Suites	Channel Power (CP), Adjacent Channel Power (ACP), Occupied Bandwidth (OBW), Spectrum Emission Mask (SEM), Third-Order Intercept (TOI), Harmonic Distortion, Spurious Emissions
Marker Functions	Peak, Next Peak, Delta, Band Power, Noise Marker, Marker Table, Frequency Counter
Power Sensor Compatibility	Direct connection of R&S NRP series power sensors (Option R&S FS-K9 and R&S NRP-Z6 required)
External Generator Control	Supported (allows external microwave generator to act as tracking generator for scalar network measurements)

RF Inputs and Outputs

RF Input Connector Type	1.85 mm female, coaxial
RF Input Impedance	50 Ω
External Reference Input Frequency	1 MHz to 20 MHz (in 1 MHz steps)
External Reference Output Frequency	10 MHz
IF Output Frequency	21.4 MHz

Digital Connectivity and Interfaces

GPIO Interface	IEEE-488.2
LAN Port	10/100 Base-T (RJ-45)
USB Host Ports	USB 2.0 (Type A)
Display Output	VGA (D-Sub 15-pin)
SCPI Command Language Compatibility	Yes

User Interface and Display

Display Type	TFT Color LCD
Display Size	21 cm (8.4 in)
Display Resolution	800 x 600 pixels (SVGA)

Power and Mechanical

AC Power Input Voltage	100 V to 240 V AC
AC Power Line Frequency	50 Hz to 60 Hz / 400 Hz
Power Consumption	Typ. 150 W (without options)
Form Factor	4U 19-inch Rackmount

Environmental and Standards Compliance

Storage Temperature Range	-40 °C to +70 °C
Recommended Calibration Cycle	1 Year

TECHNOLOGY

Spectrum Analysis

APPLICATIONS

RF, Microwave, and Millimeter-wave 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.