ROHDE & SCHWARZ

FSU8

The Rohde & Schwarz FSU8 is a high-performance spectrum analyzer covering a frequency range from 20 Hz to 8 GHz. It is engineered for demanding component design and production environments, featuring exceptional dynamic range, very low phase noise (-123 dBc/Hz at 10 kHz offset), and a high Third-Order Intercept (TOI) of typically +25 dBm. The instrument offers comprehensive analysis capabilities including resolution bandwidths up to 50 MHz, rapid ACP measurements in the time domain, and high-speed data acquisition up to 70 measurements per second.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE 488.2), LAN (10/100BaseT), RS-232, USB
Display	8.4-inch color TFT SVGA (800 × 600)
Recommended Calibration Interval	1 year

Physical

Power Supply	100 V to 240 V AC, 50/60 Hz and 400 Hz, approx. 130 VA
Operating Temperature	+5 to +40 °C
Dimensions (W×H×D)	435 × 192 × 460 mm
Weight	14.6 kg

Frequency Specifications

Frequency Range	20 Hz to 8 GHz

Amplitude Specifications

Third-Order Intercept (TOI)	+25 dBm typ.

Sweep and Trigger

Measurement Speed	Up to 70 measurements per second (including trace transfer via GPIB)

Data Acquisition and Trace Processing

Measurement Routines	TOI, MC ACP(R), OBW, CCDF, APD (standard)
Time Domain Measurements	Fast ACP in time domain
Supported Application Firmware	GSM/EDGE, Bluetooth, WCDMA/HSDPA/TD-SCDMA, CDMA2000/1xEV-DV/1xEV-DO

Inputs and Outputs

RF Input Connector	Type N female
RF Input Impedance	50 Ω

Amplitude

RF Attenuation Range	0 dB to 75 dB (in 5 dB steps)
Maximum Safe Input Power (CW)	+30 dBm (1 W) with RF attenuation ≥ 10 dB
Total Measurement Uncertainty	< 0.3 dB (up to 3.6 GHz)
Attenuator Step Size	5 dB
Level Display Range	Displayed noise floor to +30 dBm

Sweep

Sweep Time (Span > 0 Hz)	2.5 ms to 16000 s
Sweep Time (Zero Span)	1 µs to 16000 s

Signal Analysis

Detectors	Max Peak, Min Peak, Auto Peak, Sample, RMS, Average, Quasi-Peak
Trace Functions	Clear/Write, Max Hold, Min Hold, Average, View

Frequency

Reference Oscillator Aging	1 × 10^-7 / year (standard)

Inputs & Outputs

Reference Output Frequency	10 MHz
Maximum DC Input Voltage	50 V

Trigger

Trigger Sources	Free run, video, external, IF level

Power

Power Consumption	Typically 130 VA

Environmental

Storage Temperature Range	-40 °C to +70 °C

TECHNOLOGY

Spectrum Analyzer

APPLICATIONS

Wireless communications testing, component characterization, phase noise measurement, aerospace and defense test