

ROHDE & SCHWARZ

FSEM20

The Rohde & Schwarz FSEM20 is a high-performance spectrum analyzer from the FSE Series, designed for versatile frequency and amplitude measurements in RF and microwave applications. Covering a frequency range from 9 kHz to 20 GHz, it features advanced sweep rates, a high-contrast 24-cm (9.5") display, standard AM/FM demodulation, and highly flexible resolution bandwidth settings ranging down to 1 Hz.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE 488.2), RS-232-C, Centronics (Parallel), External VGA Monitor Out, Keyboard (PS/2)
Display	24-cm (9.5") Active Matrix Color LCD
Warm-up Time	10 minutes (standard), 20 minutes (with Option FSE-B4)

Physical

Power Supply	100 V to 240 V, 47 Hz to 440 Hz, approx. 180 VA (up to 250 VA with options)
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	435 mm × 236 mm × 570 mm mm
Weight	28 kg kg

Frequency and Amplitude Performance

Frequency Range	9 kHz to 25.8 GHz
Maximum Dynamic Range	150 dB

Bandwidth and Sweep Characteristics

Resolution Bandwidth (RBW) Range	1 Hz to 10 MHz
Resolution Bandwidth Steps	1/2/3/5 sequence
Minimum Video Bandwidth	1 Hz
Maximum Video Bandwidth	10 MHz
Video Bandwidth Steps	1/2/3/5 sequence
Minimum Sweep Time	1 μs
Sweep Rate	> 20 sweeps/s

Measurement Capabilities and Signal Processing

Demodulation Formats	AM, FM
Number of Markers	8
Frequency Counter	With selectable resolution
Limit and Display Lines	Numerous level & frequency lines

System Architecture and Display

Display Modes	Split-screen display
Display Representation	Quasi-analog display

Inputs, Outputs and Interfaces

RF Input Impedance	50 Ω
RF Input Connector	APC 3.5 mm

Bandwidths

FFT bandwidths	1 Hz to 1 kHz (in 1, 2, 3, 5 steps)
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Reference Frequency

Reference frequency aging (standard)	1 x 10 ⁻⁶ per year
Reference frequency aging (with Option FSE-B4)	1 x 10 ⁻⁹ per day, 1 x 10 ⁻⁷ per year

Tracking Generator Option

Tracking generator frequency range (Option FSE-B9)	9 kHz to 3.5 GHz
Tracking generator frequency range (Option FSE-B10)	9 kHz to 7 GHz

Amplitude Accuracy

Total level uncertainty (< 3.5 GHz)	< 1 dB
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Performance

Third-order intercept (TOI)	> 15 dBm (typical +20 dBm)
1 dB compression point	+10 dBm (0 dB RF attenuation)
Displayed average noise level (DANL)	<-140 dBm (10 Hz RBW, 10 MHz to 3.5 GHz)

Inputs & Outputs

Reference Input/Output	BNC, 10 MHz
IF Output (21.4 MHz)	BNC
External Trigger Input	BNC

Frequency

Frequency Span	0 Hz, 10 Hz to 25.8 GHz
Internal Reference Frequency	10 MHz

RF Input

RF Attenuation Range	0 dB to 70 dB in 10 dB steps
Maximum Continuous RF Input Power	+30 dBm (1 W)

Display

Display Resolution	640 × 480 pixels
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Storage

Floppy Disk Drive	3.5 inch, 1.44 MB
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TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

RF and Microwave 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.