

ROHDE & SCHWARZ

FSEK30

The Rohde & Schwarz FSEK30 is a high-performance spectrum and vector signal analyzer from the FSE Series, designed to cover a wide frequency range from 20 Hz up to 40 GHz. It features an ultra-wide dynamic range, high sweep speed, and versatile demodulation capabilities for both analog and digital communication standard signals.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), RS-232-C, Centronics (Parallel), External VGA, Keyboard/Mouse (PS/2)
Display	24 cm (9.5 in) active TFT color LCD
Warm-up Time	20 minutes

Physical

Power Supply	100 V to 240 V AC, 47 Hz to 440 Hz
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	435 mm × 236 mm × 570 mm mm
Weight	31 kg kg

Frequency

Frequency Range	20 Hz to 40 GHz
Frequency Span Range	0 Hz, 10 Hz to 40 GHz
Tuning Resolution	0.01 Hz
SSB Phase Noise (10 kHz offset, 1 GHz carrier)	<-113 dBc (1 Hz)

Amplitude and Level

Displayed Average Noise Level (DANL)	–150 dBm (typ.) in 10-Hz bandwidth
Third-Order Intercept (TOI)	+20 dBm typ.
1 dB Compression Point	+10 dBm

Bandwidth and Sweep

Resolution Bandwidth (RBW) Range	1 Hz to 10 MHz
Video Bandwidth (VBW) Range	1 Hz to 10 MHz
Sweep Time (Zero Span)	1 μ s to 2500 s in 5% steps
Sweep Time (Span $\geq$ 10 Hz)	5 ms to 16 000 s in steps $\leq$ 10%
Sweep Time Error Limit	< 1%
Sampling Rate	50 ns (20 MHz A/D converter)
Refresh Rate	25 sweeps/s (quasi-analog)
Sweep Points	500

Measurement and Analysis

AF Demodulation Types	AM and FM
Analog Modulation Formats	AM, FM, PM
Digital Demodulation Formats (with option)	BPSK, QPSK, $\pi/4$ -DQPSK, 8PSK, QAM, MSK, GMSK, 2FSK

Inputs and Outputs

RF Input Impedance	50 Ω
RF Input Connector Type	2.92 mm (female)
External Reference Input Frequency	10 MHz
External Reference Output Frequency	10 MHz
IF Output Frequency	21.4 MHz
Noise Source Drive Voltage	28 V

RF Input

RF Attenuation Range	0 dB to 70 dB
RF Attenuation Steps	10 dB
Maximum RF Input Power	30 dBm (1 W) with RF attenuation $\geq$ 10 dB
Maximum DC Input Voltage	0 V

Frequency Accuracy

Internal Reference Oscillator Aging Rate	1 x 10 ⁻⁹ / day (after 30 days of operation); 1 x 10 ⁻¹⁰ / day with Option FSE-B4
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Amplitude

Total Level Uncertainty (f < 1 GHz)	< 1 dB
Total Level Uncertainty (f < 7 GHz)	< 1.5 dB
Total Level Uncertainty (f < 40 GHz)	< 2.5 dB

Storage & Media

Internal Storage	Hard disk drive (HDD)
Removable Storage	3.5" floppy disk drive (FDD)

Power

Power Consumption	200 VA to 280 VA (configuration dependent)
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Environmental

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

Number of Traces	4
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Compliance & Safety

EMC Compliance	EN 50081-1, EN 50082-2
Safety Compliance	EN 61010-1

TECHNOLOGY

Superheterodyne Spectrum & Vector Signal Analysis

APPLICATIONS

RF and Microwave Signal Analysis, Digital Modulation Testing

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