

ROHDE & SCHWARZ

FSP30

The Rohde & Schwarz FSP30 is a high-performance spectrum analyzer spanning 20 Hz to 30 GHz, engineered to serve both advanced development and demanding production environments. It features exceptional level measurement accuracy, outstanding RF characteristics, and quick trace acquisition rates, combined with standard measurement suites like ACP(R) and TOI.

SPECIFICATIONS

General

Display	21 cm (8.4 in) Color TFT LCD, 640 x 480 pixels
Warm-up Time	30 minutes

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 400 Hz
Operating Temperature	5 °C to 40 °C °C
Dimensions (W×H×D)	435 mm × 192 mm × 460 mm mm
Weight	16 kg kg

Frequency Specifications

Frequency Range	9 kHz to 30 GHz
Resolution Bandwidth (RBW) Range	1 Hz to 10 MHz

Spectral Purity and Noise

Displayed Average Noise Level (DANL)	-155 dBm (1 Hz)
Phase Noise @ 10 kHz Offset	-113 dBc/Hz (typ., CF 500 MHz)
Phase Noise @ 10 MHz Offset	-145 dBc/Hz (typ., CF 500 MHz)

Amplitude and Dynamic Range

Total Measurement Uncertainty	0.5 dB
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Bandwidth (RBW / VBW)

Channel Filter Range	100 Hz to 5 MHz
FFT Filter Range	1 Hz to 30 kHz
Filter Types	Gaussian, RRC, FFT, Channel, EMI

Measurement and Detection Functions

Standard Measurement Routines	TOI, ACP(R), OBW, CCDF, APD
Fast ACP in Time Domain	Supported
Measurement Speed	Up to 80 measurements/s (including trace transfer via GPIB)
Application Firmware Support	GSM/EDGE, Bluetooth, WCDMA/HSDPA/TD-SCDMA, CDMA2000/1xEV-DV/1xEV-DO, WLAN
Detector Types	Quasi-peak, RMS, Auto Peak, Peak, Min Peak, Sample

RF Inputs and Outputs

RF Input Impedance	50 Ohms
RF Input Connector	3.5 mm male test port (compatible with N-type female adapter)

Frequency

Span Range	0 Hz, 10 Hz to 30 GHz
Reference Frequency Aging	1 x 10 ⁻⁶ per year (standard); 1 x 10 ⁻⁷ per year (with option FSP-B4)
Reference Frequency Temperature Stability	1 x 10 ⁻⁶ (0 °C to 50 °C)
Reference Frequency Temperature Stability (OCXO)	1 x 10 ⁻⁸ (0 °C to 50 °C, with FSP-B4 option)

Bandwidth

Video Bandwidth (VBW) Range	1 Hz to 10 MHz
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Sweep

Sweep Time (Span = 0 Hz)	1 μs to 16000 s
Sweep Time (Span >= 10 Hz)	2.5 ms to 16000 s
Number of Sweep Points	125 to 8001

Amplitude

Maximum Safe Input Level (CW)	30 dBm (1 W)
Maximum Input DC Voltage	0 V

Triggering & Sync

Trigger Sources	Free Run, Video, External, IF Power
External Reference Input	10 MHz

Performance

Third Order Intercept (TOI)	> 16 dBm (typ. 18 dBm @ 2 GHz)
1 dB Compression Point	0 dBm (nominal, 0 dB RF attenuation, > 10 MHz)

RF Input

RF Attenuation Range	0 dB to 75 dB
RF Attenuation Step Size	5 dB
Maximum Safe Pulse Input Voltage	150 V (pulse width < 10 μ s, duty cycle < 1%, RF attenuation $\geq$ 10 dB)
Maximum Safe Pulse Input Energy	10 mWs (pulse width 10 μ s, RF attenuation $\geq$ 10 dB)

Outputs

IF Output Frequency	21.4 MHz
Video Output Voltage	0 V to 1 V (open circuit, proportional to trace display)
Noise Source Control Voltage	0 V / 28 V (BNC, max. 100 mA)
Probe Power Output	+15 V DC, -12.6 V DC (max. 150 mA)

Environmental

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

EMC/EMI Standards	EN 55011 Class B, EN 61326-1
Safety Standards	EN 61010-1, UL 3111-1, CAN/CSA-C22.2 No. 1010.1

TECHNOLOGY

Superheterodyne Spectrum Analysis

APPLICATIONS

RF and Microwave Testing, Wireless Communications Development, Spectrum Monitoring

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