

ROHDE & SCHWARZ

FSW26

The Rohde & Schwarz FSW26 is a high-performance signal and spectrum analyzer designed to meet demanding RF measurement requirements, spanning a frequency range from 2 Hz to 26.5 GHz. Known for its low phase noise and exceptional dynamic range, it offers a standard 10 MHz analysis bandwidth, extendable up to 160 MHz via hardware options. Equipped with an intuitive 12.1" touchscreen interface, it is optimal for analyzing complex radar, wireless communications, and aerospace signals.

SPECIFICATIONS

General

Interfaces	LAN (10/100/1000Base-T), USB 2.0, USB 3.0, GPIB (optional FSW-B10), DVI-D, DisplayPort
Display	12.1" (31 cm) high-resolution touchscreen
Warm-up Time	20 min

Physical

Power Supply	100 V to 240 V AC (50 Hz to 60 Hz) or 100 V to 120 V AC (400 Hz); 150 W typ., max. 250 W (with options)
Operating Temperature	+5 °C to +50 °C °C
Dimensions (W×H×D)	462 mm × 240 mm × 504 mm mm
Weight	18.6 kg kg

Frequency

Frequency Range	2 Hz to 26.5 GHz
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Bandwidth

Resolution Bandwidth (RBW) Range	1 Hz to 10 MHz (with standard filter)
Standard Analysis Bandwidth	10 MHz
Maximum Analysis Bandwidth	2 GHz (with options)
I/Q Demodulation Bandwidth (Standard)	10 MHz
I/Q Demodulation Bandwidth (with FSW-B28)	28 MHz
I/Q Demodulation Bandwidth (with FSW-B40)	40 MHz
I/Q Demodulation Bandwidth (with FSW-B80)	80 MHz
I/Q Demodulation Bandwidth (with FSW-B160)	160 MHz
I/Q Demodulation Bandwidth (with FSW-B320)	320 MHz
I/Q Demodulation Bandwidth (with FSW-B512)	512 MHz
I/Q Demodulation Bandwidth (with FSW-B2001)	2 GHz

Amplitude

DANL at 2 GHz	-156 dBm (1 Hz) typical
DANL at 8 GHz	-156 dBm (1 Hz) typical
DANL at 2 GHz (noise cancellation, preamplifier off)	-169 dBm (1 Hz) typical
DANL at 20 GHz	-150 dBm (1 Hz) typical
Display Range	Displayed noise floor to +30 dBm
WCDMA ACLR Dynamic Range	88 dB (with noise cancellation)
Maximum Input Level (DC Voltage, AC coupled)	50 V
Maximum Input Level (DC Voltage, DC coupled)	0 V
Maximum Input Level (CW RF Power, RF attenuation = 0 dB)	20 dBm (0.1 W)
Maximum Input Level (CW RF Power, RF attenuation ≥ 10 dB)	30 dBm (1 W)
Pulse Spectral Density	97 dB μ V/MHz (RF attenuation = 0 dB, RF preamplifier OFF)
Maximum Pulse Voltage	150 V (RF attenuation ≥ 10 dB)
Maximum Pulse Energy	1 mWs (RF attenuation ≥ 10 dB, 10 μ s)

Phase Noise and Spurious

Residual Spurious Response ($1 \text{ MHz} < f < 8.9 \text{ GHz}$)	$< -110 \text{ dBm}$ (RF attenuation = 0 dB)
Residual Spurious Response ($f \geq 8.9 \text{ GHz}$)	$< -100 \text{ dBm}$ (RF attenuation = 0 dB)

Sweep

Sweep Rate	up to 10000 sweeps/s
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Inputs, Outputs, and Connectivity

Power Sensor Support	Integrated support for R&S NRP-Zxx power sensors
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Control and Software

MultiView Display Mode	Allows multiple measurement applications to run and display in parallel
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Inputs & Outputs

RF Input Connector	3.5 mm female (ruggedized)
Reference Frequency Output	10 MHz (standard), 100 MHz (with FSW-B4 option)
Reference Frequency Input	1 MHz to 20 MHz (in 1 Hz steps)
External Reference Frequency Input Range	1 MHz to 20 MHz (in 1 Hz steps), 100 MHz
External Reference Frequency Output	10 MHz, 100 MHz

Display

Display Size	12.1 inch (31 cm)
Display Resolution	1280 × 800 pixels (WXGA)

Performance

Reference Frequency Aging per Year	1 x 10 ⁻⁷ (standard), 3 x 10 ⁻⁸ (with FSW-B4 OCXO option)
Reference Temperature Stability	1 x 10 ⁻⁷ (0 °C to 50 °C, standard), 1 x 10 ⁻⁹ (0 °C to 50 °C, with FSW-B4 option)
Level Measurement Uncertainty (f < 3.6 GHz)	0.37 dB (95% confidence level)
Sweep Points	101 to 100 001
Trace Detectors	Max Peak, Min Peak, Auto Peak, Sample, RMS, Average, Quasi-Peak
Trace Functions	Clear/Write, Max Hold, Min Hold, Average, View
Trigger Sources	Free Run, Video, External, External 2, External 3 (option), I/Q Power, IF Power, RF Power, Power Sensor, Time

Environmental

Storage Temperature Range	-40 °C to +70 °C
Operating Altitude	Up to 3000 m

RF Input

RF Attenuation Range (Mechanical)	0 dB to 75 dB (in 5 dB steps)
RF Attenuation Range (Electronic)	0 dB to 30 dB (in 1 dB steps, with FSW-B25 option)
RF Input VSWR (f < 3.6 GHz)	< 1.15 (with 10 dB RF attenuation)

Options

YIG Preselector Bypass	Supported (with FSW-B11 option)
GPIO Interface Option	FSW-B10
Preamplifier Option	FSW-B24 (100 kHz to 26.5 GHz)
Real-Time Analysis Bandwidth Options	160 MHz (FSW-B160R) / 320 MHz (FSW-B320R) / 512 MHz (FSW-B512R) / 800 MHz (FSW-B800R)

TECHNOLOGY

Signal and Spectrum Analysis

APPLICATIONS

RF and microwave testing, radar system analysis, aerospace and defense, wireless communications, oscillator measurement

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