

ROHDE & SCHWARZ

FSW43

The Rohde & Schwarz FSW43 is a premier signal and spectrum analyzer with a frequency range from 2 Hz to 43.5 GHz. Designed to deliver outstanding RF dynamic range, speed, and accuracy, it is highly optimized for demanding aerospace, defense, and automotive radar applications, offering analysis bandwidths up to 160 MHz and external frequency extensions up to 110 GHz.

SPECIFICATIONS

General

Interfaces	USB, LAN, GPIB
Display	12.1" (31 cm) WXGA touchscreen

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 60 Hz
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Frequency

Frequency Range (DC Coupled)	2 Hz to 43.5 GHz
Frequency Range (AC Coupled)	10 MHz to 43.5 GHz
Frequency Resolution	0.01 Hz

Bandwidth

Resolution Bandwidth (Standard)	1 Hz to 10 MHz
Resolution Bandwidth (with FSW-B8 option)	80 MHz
Standard I/Q Demodulation Bandwidth	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

Displayed Average Noise Level (DANL)

DANL at 2 GHz	-156 dBm (1 Hz) typical
DANL at 8 GHz	-156 dBm (1 Hz) typical
DANL at 2 GHz (noise cancellation, preamp off)	-169 dBm (1 Hz) typical
DANL at 20 GHz	-150 dBm (1 Hz) typical
DANL at 40 GHz	-144 dBm (1 Hz) typical

Amplitude & Level

Display Range	Displayed noise floor up to +30 dBm
WCDMA ACLR Dynamic Range	88 dB (with noise cancellation)
Total Measurement Uncertainty at 8 GHz	<0.4 dB
Maximum Safe Input DC Voltage (AC coupled)	50 V
Maximum Safe Input DC Voltage (DC coupled)	0 V
Maximum CW RF Power (RF attenuation = 0 dB)	20 dBm (0.1 W)
Maximum CW RF Power (RF attenuation >= 10 dB)	30 dBm (1 W)

Signal Analysis & Demodulation

Multi-Standard Radio Analyzer (MSRA)	Supported (runs multiple measurement applications in parallel)
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Inputs & Outputs

RF Input Connector	2.92 mm male, 50 Ω
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Signal Analysis

Maximum I/Q Demodulation Bandwidth	8.3 GHz (with R&S FSW-B8001 option)
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Amplitude

Amplitude Measurement Range	DANL to +30 dBm
RF Input Impedance	50 Ω

I/Q Demodulation Bandwidth (Options)

I/Q Demodulation Bandwidth (with FSW-B320)	320 MHz
I/Q Demodulation Bandwidth (with FSW-B512)	512 MHz
I/Q Demodulation Bandwidth (with FSW-B1200)	1.2 GHz
I/Q Demodulation Bandwidth (with FSW-B2001)	2 GHz
I/Q Demodulation Bandwidth (with FSW-B4001)	4.4 GHz
I/Q Demodulation Bandwidth (with FSW-B6001)	6.4 GHz
I/Q Demodulation Bandwidth (with FSW-B8001)	8.3 GHz

Hardware & Interfaces

Display Resolution	1280 × 800 pixels (WXGA)
LAN Port	10/100/1000Base-T (RJ-45)
External Reference Output	BNC female, 10 MHz
GPIO Interface	Supported (via FSW-B10 option)

Environmental & Physical

Storage Temperature Range	-40 °C to +70 °C
Operating Altitude	Up to 4600 m

TECHNOLOGY

Superheterodyne Signal & Spectrum Analysis

APPLICATIONS

Microwave link testing, aerospace and defense radar, automotive radar, and satellite communication measurements

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