

ROHDE & SCHWARZ

FSH18

The Rohde & Schwarz FSH18 is a handheld, battery-powered spectrum analyzer designed for microwave applications in the field. Operating from 10 MHz up to 18 GHz, it is ideal for servicing microwave links, field strength measurements, and signal monitoring.

SPECIFICATIONS

General

Interfaces	Optical RS-232, USB (via optical-to-USB adapter cable)
Display	4.7" color LCD, 320 × 240 pixels
Internal Setup and Trace Memory	Up to 100 configurations and traces
Warm-up Time	20 min

Physical

Power Supply	100 V to 240 V AC (50/60 Hz) external adapter, 15 V DC input, typ. 7 W
Operating Temperature	0 to 50 °C
Dimensions (W×H×D)	129 mm × 283 mm × 115 mm mm
Weight	2.5 kg

Frequency Specifications

Frequency Range	10 MHz to 18 GHz
Frequency Resolution	1 Hz
Reference Frequency Accuracy	2 ppm
Reference Frequency Temperature Drift	2 ppm (0 °C to 50 °C)
Reference Frequency Aging	2 ppm/year
Frequency Span Range	0 Hz, 10 kHz to 18 GHz
Spectral Purity (Phase Noise)	<-100 dBc/Hz @ 100 kHz offset (typ.)

Sweep and Trigger

Sweep Time (Span >= 10 kHz)	100 ms to 1000 s
Sweep Time (Zero Span)	1 ms to 100 s
Sweep Trigger Source	Free Run, External, Video
Trigger Delay Range	125 μs to 125 s (Zero Span)
Sweep Modes	Continuous, Single
Number of Sweep Points	301

Bandwidths

Resolution Bandwidths (RBW) Range	100 Hz to 1 MHz
Resolution Bandwidths (RBW) Steps	1 and 3 steps
Video Bandwidths (VBW) Range	10 Hz to 1 MHz
Video Bandwidths (VBW) Steps	1 and 3 steps
Resolution Filter Shape Factor	< 5 (60 dB / 3 dB bandwidth)

Amplitude and Noise

Displayed Average Noise Level (DANL) (3 GHz to 6 GHz)	typ. -128 dBm (RBW 100 Hz)
Displayed Average Noise Level (DANL) (100 MHz to 3 GHz)	typ. -128 dBm (RBW 100 Hz)
Displayed Average Noise Level (DANL) (6 GHz to 18 GHz)	typ. -120 dBm (RBW 100 Hz)
Maximum Safe RF Input Power	+20 dBm (continuous)
Maximum Safe RF Input Power (Short Term)	+30 dBm (< 3 s)
Maximum DC Input Voltage	80 V
Input Attenuator Range	0 dB to 30 dB (in 10 dB steps)

Measurement Accuracy

Level Accuracy (6 GHz to 18 GHz)	2.5 dB
RF Input VSWR (10 MHz to 6 GHz)	typ. < 1.5
RF Input VSWR (6 GHz to 18 GHz)	typ. < 2.0
Reference Level Range	-80 dBm to +20 dBm
Reference Level Steps	1 dB or 10 dB

Measurement Modes and Functions

Standard Measurement Types	Channel power, Occupied bandwidth (OBW), TDMA power, C/N ratio, Spectrum emission mask
Marker Functions	Peak, Next Peak, Minimum, Center Frequency, Reference Level, Noise Marker, Frequency Counter
Number of Markers	1 normal marker and up to 5 delta markers
Detector Types	Sample, Max Peak, Min Peak, Auto Peak, RMS
Trace Functions	Clear/Write, Max Hold, Min Hold, Average, View
Limit Lines Support	Upper and lower limit lines with Pass/Fail indication

Connectivity and Interfaces

RF Input Connector	N female
RF Input Impedance	50 Ω
External Trigger / Reference Input	BNC female (shared)
Audio Output Port	3.5 mm jack for headphones

Power and Battery

Battery Type	Lithium-ion battery
Battery Charging Time	approx. 4 h (instrument off)

Physical Characteristics

Width	194 mm
Height	300 mm
Depth	144 mm
Portability Features	Hand strap, integrated kickstand
Chassis Material	Robust plastic housing with shock-absorbing corners

Environmental Specifications

Relative Humidity Range	95% (non-condensing)
IP Rating	IP51

Compliance and Standards

EMC Compliance	EN 61326-1, EN 55011 Class B
Electrical Safety Standards	EN 61010-1
Calibration Interval	1 year (recommended)

Performance

Third-Order Intercept (TOI)	+10 dBm (typ. +15 dBm) at 1 GHz
SSB Phase Noise (100 kHz offset)	<-95 dBc/Hz (typ. -105 dBc/Hz) at 500 MHz
SSB Phase Noise (1 MHz offset)	<-115 dBc/Hz (typ. -125 dBc/Hz) at 500 MHz
Number of Traces	2 (1 active trace, 1 memory trace)

Power

Power Consumption	12 W
External Power Adapter AC Input	100 V to 240 V AC, 50 Hz to 60 Hz
External DC Input Voltage Range	15 V to 20 V DC

Interfaces

GPS Receiver Interface	Supports external R&S HA-Z240 GPS receiver via USB
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Frequency

External Reference Input Frequency	10 MHz
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Inputs & Outputs

External Trigger Input Level	TTL level
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Expansion & Accessories

Power Sensor Compatibility	R&S FSH-Z1 (10 MHz to 8 GHz), R&S FSH-Z18 (10 MHz to 18 GHz)
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Environmental

Environmental Resistance (Vibration)	Meets MIL-PRF-28800F Class 3
Environmental Resistance (Shock)	Meets MIL-PRF-28800F Class 3

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

Microwave link servicing, field strength measurements, and signal 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.