ROHDE & SCHWARZ

FS300

The Rohde & Schwarz FS300 is a high-precision, portable spectrum analyzer covering a frequency range from 9 kHz to 3 GHz. Utilizing advanced digital frequency processing, it delivers exceptional measurement quality, reliability, and value for RF analysis in both field and lab environments.

SPECIFICATIONS

General

Interfaces	USB (Type B, device)
Display	5.7" TFT color LCD (320 × 240 pixels)
Power Consumption	typ. 30 W
Warm-Up Time	20 minutes

Physical

Operating Temperature	+5 °C to +40 °C °C
Dimensions (W×H×D)	219 mm × 147 mm × 350 mm mm

Frequency and Amplitude Performance

Frequency Range	9 kHz to 3 GHz
Resolution Bandwidth (RBW) Range	200 Hz to 1 MHz
Video Bandwidth (VBW) Range	10 Hz to 1 MHz (1, 3 sequence)
Dynamic Range	>137 dB
Noise Level (DANL)	typ. -120 dBm (at 300 Hz RBW)
Absolute Amplitude Accuracy	<0.7 dB
Frequency Counter Resolution	1 Hz
Maximum Safe RF Input Level	+30 dBm

Inputs, Outputs and Interfaces

RF Input Impedance	50 Ω
RF Input Connector Type	N female
External Reference Input Frequency	10 MHz
External Reference Input Connector	BNC female

Physical and Environmental Specifications

Storage Temperature Range	-20 °C to +70 °C

Frequency

Frequency Span Range	0 Hz, 1 kHz to 3 GHz
SSB Phase Noise	<-95 dBc (1 Hz) at 10 kHz offset (500 MHz carrier)
Frequency Aging	< 1 × 10^{-6} per year
Frequency Temperature Drift	< 2 × 10^{-6} (0 °C to 50 °C)
Frequency Resolution	1 Hz

Sweep

Sweep Time (Span > 0 Hz)	50 ms to 100 s
Sweep Time (Zero Span)	150 µs to 100 s
Sweep Triggers	Free Run, Video, External

Amplitude

RF Attenuation Range	0 to 50 dB (10 dB steps)
Reference Level Range	-80 dBm to +20 dBm (1 dB steps)
Third-Order Intercept (TOI)	typ. +10 dBm
1 dB Compression Point	typ. 0 dBm (0 dB RF attenuation)

Signal Processing

Detectors	Auto Peak, Max Peak, Min Peak, Sample, RMS

Inputs & Outputs

External Trigger Input Connector	BNC female (rear panel)
Audio Output Connector	3.5 mm jack (rear panel)
External Reference Input Level	0 dBm to +10 dBm
Max. DC Voltage at RF Input	0 V
Max. RF Pulse Input Voltage	150 V
USB Interface Type	USB 1.1 Type-B (device)

Display

Display Type	Color TFT LCD
Display Size	5.7" (14.2 cm)
Display Resolution	320 × 240 pixels (QVGA)

Measurement Settings

Level Units	dBm, dBµV, dBmV
Active Markers	1 normal, 1 delta

Environmental & Compliance

Vibration Resistance	5 Hz to 55 Hz (IEC 60068-2-6)
Electrical Safety Compliance	EN 61010-1, UL 3111-1, CSA C22.2 No. 1010.1
EMC Compliance	EN 61326-1, EN 50081-1, EN 50082-2

TECHNOLOGY

Superheterodyne Spectrum Analysis

APPLICATIONS

RF Spectrum Analysis and Testing