ROHDE & SCHWARZ

SFE100

The Rohde & Schwarz SFE100 is a highly compact, single-standard test transmitter and signal generator featuring realtime coding for a comprehensive range of digital and analog broadcasting standards. Occupying only 1 HU, it integrates a baseband signal source (such as a transport stream player or audio/video generator) and an optional arbitrary waveform generator, making it highly versatile and efficient for production test systems and laboratory environments.

SPECIFICATIONS

General

Interfaces	LAN (10/100 Base-T), USB 2.0, GPIB (IEEE 488, optional)
Display	2-line liquid crystal display (LCD) with status LEDs

Physical

Power Supply	100 V to 240 V AC, 50 Hz to 60 Hz
Operating Temperature	5 °C to 45 °C °C
Dimensions (W×H×D)	427 mm × 44 mm × 450 mm mm
Weight	6 kg

RF Output Characteristics

Frequency Range	100 kHz to 2.7 GHz
Frequency Resolution	0.1 Hz
Output Power Range	-110 dBm to +15 dBm
Output Power Range with Power Amplifier	up to +27 dBm (with optional integrated power amplifier)
Output Power Resolution	0.1 dB
Output Impedance	50 Ω
RF Output Connector Type	N female

Modulation & Signal Generation

Supported Digital TV Standards	DVB-T, DVB-T2, DVB-H, ISDB-T, ISDB-TB, DTMB, ATSC/8VSB, ATSC-M/H, DVB-C, DVB-C2, J.83/B (standard-dependent)
Supported Audio Broadcasting Standards	DAB, DAB+, T-DMB, FM/RDS, DRM, DRM+ (standard-dependent)
Arbitrary Waveform Generator (AWG)	Optional integrated ARB/AWG for custom waveform playback
Baseband Signal Source Options	Integrated Transport Stream (TS) Player, Audio/Video Generator

Signal Quality & Spectral Purity

Phase Noise	<-100 dBc/Hz (at 1 GHz with 20 kHz carrier offset, typ.)
Harmonics	<-30 dBc
Non-Harmonics	<-60 dBc (at >10 kHz carrier offset)

Connectivity & Reference Signals

External Reference Input	10 MHz, BNC female
Reference Output	10 MHz, BNC female
ASI Input	BNC female (optional for external transport streams)
TS-over-IP Input	RJ-45 (optional)

Control, Software & Integration

Command Set	SCPI
User Interface	Local control keys and LCD, or remote Windows PC software (GUI identical to R&S SFU / R&S SFE)
Operating System	Windows Embedded

Power & Physical Specifications

Form Factor	1 HU, 19-inch rackmount width
Cooling	Active internal fan cooling

Environmental & Compliance

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

RF Performance

Level Accuracy	< 0.5 dB (typ. 0.3 dB)
Modulation Error Ratio (MER)	> 40 dB (typ. 43 dB, OFDM)
Carrier Suppression	> 50 dB
Wideband Noise	< -140 dBc/Hz (at > 10 MHz carrier offset, typ. -145 dBc/Hz)

Reference Frequency

Reference Frequency Aging	< 1 × 10^-6 / year
Reference Frequency Temperature Stability	< 1 × 10^-6 (0 °C to +50 °C)

Power Supply

Power Consumption	Typ. 40 W, max. 80 W

Baseband Generator

ARB Sample Rate	400 Hz to 40 MHz

Modulation & Coding

DVB-T/H Modulation Schemes	QPSK, 16QAM, 64QAM
DVB-T/H Transmission Modes	2k, 4k, 8k
DVB-T/H Guard Intervals	1/4, 1/8, 1/16, 1/32
DVB-T/H Code Rates	1/2, 2/3, 3/4, 5/6, 7/8
DVB-C Modulation Schemes	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
ATSC Modulation Scheme	8VSB
DVB-S/DSNG Modulation Schemes	QPSK, 8PSK, 16QAM
DVB-S2 Modulation Schemes	QPSK, 8PSK, 16APSK, 32APSK

Inputs & Outputs

Digital I/Q Interface Connector	26-pin MDR (option dependent)
ASI Input Connector	BNC, 75 Ω

Compliance

EMC Standards	EN 55011 Class B, EN 61326-1
Safety Standards	EN 61010-1

TECHNOLOGY

Realtime Broadcast Signal Generation

APPLICATIONS

Production testing of TV and audio broadcast receivers

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