

ROHDE & SCHWARZ

SMT06

The Rohde & Schwarz SMT06 is a high-performance analog signal generator designed for comprehensive receiver testing and electromagnetic susceptibility (EMS) measurements. Covering a frequency range from 5 kHz to 6 GHz, the SMT06 offers exceptional spectral purity, high level accuracy, and versatile modulation capabilities (AM, FM, phase, and pulse modulation) alongside special functions like stereo and VOR/ILS generation via options.

SPECIFICATIONS

Frequency

Minimum Frequency	5 kHz Hz
Maximum Frequency	6 GHz Hz
Frequency Resolution	0.1 Hz

Output

Maximum Output Power	+13 dBm dBm
Output Power Range	-144 dBm to +13 dBm (overrange to +16 dBm)

Modulation

Modulation	AM, FM, Phase Modulation (M), Pulse Modulation
Sweep Modes	RF, LF, and Level sweep (automatic, single, manual, step)

General

Interfaces	GPIB (IEEE-488.2), RS-232-C
Stored Settings Memory	50 complete instrument setups
Memory Locations Count	50

Frequency Specifications

External Reference Input Frequency	10 MHz
------------------------------------	--------

Amplitude and Level Specifications

Level Resolution	0.1 dB
Output Impedance	50 Ω
Output VSWR	< 1.5 (f <= 1.5 GHz), < 1.8 (f <= 3 GHz), < 2.0 (f <= 6 GHz)
Maximum Reverse RF Power Protection	50 W (1 MHz to 6 GHz)
Maximum Reverse DC Voltage Protection	50 V

Spectral Purity

Harmonics Level	<-30 dBc (levels <= +10 dBm)
Subharmonics Level	none (f < 1.5 GHz), <-50 dBc (1.5 GHz to 3 GHz), <-40 dBc (3 GHz to 6 GHz)

Amplitude Modulation (AM)

AM Operating Modes	Internal, External AC, External DC
AM Depth Range	0% to 100%
AM Depth Resolution	0.1%
AM Modulation Frequency Range	DC to 100 kHz (DC coupled), 10 Hz to 100 kHz (AC coupled)
AM Distortion	< 1% (at 30% depth, f = 1 kHz)

Phase Modulation (Phi-M)

Phase Modulation Operating Modes	Internal, External AC, External DC
----------------------------------	------------------------------------

Physical and Environmental Specifications

Operating Temperature Range	0 °C to +55 °C
Storage Temperature Range	-40 °C to +70 °C

Hardware Options and Accessories

High-Stability OCXO Reference Option	SM-B1 (aging < 1 × 10 ⁻⁹ / day)
Stereo / VOR/ILS Generator Option	SM-B6

Remote Control

Remote Control Command Set	SCPI
----------------------------	------

Inputs & Outputs

RF Output Connector	N female (50 Ω)
LF Output Connector	BNC female
External AM Input Connector	BNC female
External FM/Phase Modulation Input Connector	BNC female
External Reference Input Connector	BNC female
Internal Reference Output Connector	BNC female

Power

AC Input Voltage Range	90 V to 264 V
AC Input Frequency Range	47 Hz to 440 Hz

Interfaces

GPIO Interface Standard	IEEE 488.2
-------------------------	------------

TECHNOLOGY

RF Analog Signal Generation

APPLICATIONS

Receiver Testing, EMS Measurements, Avionics Testing

