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SSG Series

RF Test Equipment for Wireless Communications

Synthesized CW Signal Generator



The modern signal generator has evolved into a complex, expensive instrument. To provide an alternative for many test scenarios in which only a high-quality CW source is required, dBm introduces the SSG synthesized CW signal generator. This instrument focuses on the basics: simplicity, connectivity, and excellent RF performance in a small and low cost solution.

Sharing resources within a lab or facility often means carrying test equipment around a crowded lab. The SSG is so small and light it can be held with one hand, yet it has enough mass to stay planted on the workbench with heavy coax cables attached to it.

The SSG gives up little or nothing in terms of performance to other generators which can be more than twice the price. Phase noise performance is excellent, and switching speed is much faster than YIG based signal generators.

Front panel control of the frequency and amplitude is achieved with a combination of buttons and a rotary knob. Step size is determined by positioning the cursor at the desired digit and turning the knob, or an arbitrary step size can be set independently for the frequency and amplitude.

The SSG can function within an automated test system, since it can be remotely controlled via IEEE-488.2, RS-232, and 10/100BaseT Ethernet. This combined with its fast settling time makes it a good choice for high-volume production environments.

Applications

- A laboratory workhorse
- Programmable LO for frequency converters
- Frequency hopping source
- RF device characterization
- Tracking generator source

Features

- Low noise (-103 dBc/Hz 1 kHz offset @ 1GHz)
- Fast switching (<2msec typ.)
- Small and lightweight (10” x 10” x 3”)
- Non-volatile memory for storage/recall of instrument settings
- IEEE-488.2, LAN, and RS-232 interfaces standard

Options

- Fast switching speed (200 usec)
- File driven hopping/swept frequency mode

Synthesized CW Signal Generator

Specifications

Frequency Range	10 MHz to 4000 MHz
Frequency Resolution	10 Hz up to 1999.99999 MHz 20 Hz for 2000 - 4000 MHz
Frequency Accuracy	+/- 2 PPM internal reference or per external reference
Frequency update rate	2 ms via LAN or GPIB
Settling time	
Standard	2 msec typical <12 msec at band crossings (1 GHz, 2 GHz)
Opt HS	200 usec for steps less than 10 MHz
Spectral Purity	
Phase Noise	at 1 GHz - 58 dBc @ 10 Hz - 81 dBc @ 100 Hz -103 dBc @ 1 kHz -108 dBc @ 10 kHz -109 dBc @ 100 kHz -128 dBc @ 1 MHz
Opt HS	Degrade 20 dB at offsets less than 100 kHz
Spurious	<-55 dBc
Noise floor	<-145 dBm/Hz
2nd Harmonic	<-30 dBc
3rd Harmonic	<-30 dBc
Output Power	
Power Range	+10 dBm to -30 dBm
Power Resolution	0.1 dB
Power Accuracy	+/- 0.5 dB
Impedance	50 ohms
VSWR	2:1 maximum into 50 ohms
External Reference	10 MHz sine, 0 dBm +/- 3 dB

Environmental	
Operating Temperature	0°C to +35°C
Shock and Vibration	MIL-PRF 28800F Type III Class 4
EMI	MIL-STD 461B RE02 Part 2 and CISPR II
Control and interface	
Local interface	Front panel keypad & display
Remote interface	IEEE-488.2, LAN, RS-232
Primary power	
Voltage	90-264 VAC autoranging
Frequency	48-66 Hz
Consumption	40 VA, maximum
Fuse	1A, slow-blow
Physical	
Operating temperature	0° to 35° C
Dimensions	10” W x 2.75” H x 10” D

Ordering Information

Model No.	Description
SSG - 10/4000	10MHz to 4000MHz

Options	Description
SSG optHS	200 usec switching speed
SSG opt DYN	Dynamic hopping mode

Distributor

RF Test Equipment for Wireless Communications

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