



MAXWELLON SG2060

9kHz~6GHz

Multi Standard Signal Generator

2023

Maxwellon SG2060 series RF signal generator provides a wide range of product choices for different functional requirements and application scenarios, suitable for teaching, research, product development, production, and maintenance. Each type of product has outstanding features in its function to characterize the focus of its testing field. SG2060 series features a variety of key analog modulation functions, standard digital modulation functions, and customizable dedicated modulation methods. Rich logic hardware interface and widescreen LCD display make it easy to control various operations.

■ Key Feature

- Frequency range from 9 kHz to 6 GHz
- Typical output power from -120dBm to +10dBm
- Multiple digital modulation formats (ASK/PSK/FSK), built-in IQ modulator (B type)
- AM/FM/ΦM analog modulation functions, modulation rate up to 1MHz
- Support pulse modulation, minimum pulse width 200ns
- Support linear frequency modulation which can simulate radar signals
- Customizable dedicated communication modulation (SSB/DSB/CW)
- As frequency upper conversion, support external input IF signals
- Standard IF input output, USB/LAN remote control interface, SCPI supported

■ Specification

Frequency Properties		
Frequency Range	9kHz ~ 6GHz	
Frequency Resolution	0.23 Hz	
Internal Reference Frequency	10 MHz	
Temperature Stability	±1ppm (option: ±100ppb)	
Internal Reference Output	10 MHz, +2 dBm (typ.)	
Spectral Purity		
Harmonic	< -35 dBc (typ.)	
Non-Harmonic	< -60 dBc (typ.)	
SSB Phase Noise	Carrier Frequency Offset @f=1GHz	-98 dBc / Hz @ 10kHz offset
Sweep Properties		
Sweep Mode	Step Sweep, List Sweep	
Sweep points	Step Sweep	2 ~ 65535
	List Sweep	2 ~16383
Dwell time	5ms~50s	
Trigger mode	Free/External	
Power Properties		
Output Power Range	9 kHz~50 kHz	- 120 dBm~0 dBm
	50 kHz~6 GHz	- 120 dBm~+ 10 dBm
Power Accuracy	±1.5 dB(typ.)	
Modulation Characteristics		
Internal Modulation Signal Generator (LF)	Waveform	Sine, Square, Triangle, Sawtooth
	Sine	1 Hz~500 kHz
	Square/Triangle	1 Hz~100 kHz
	Sawtooth	1 Hz~20 kHz

Analog Modulation (AM/FM/ΦM),Supporting internal and external modulation sources			
		SG2060A	SG2060B
Amplitude Modulation	Modulation Depth	0 %~100 %	1 %~100 %
	Modulation Rate	20 Hz~1 MHz	1 Hz~1 MHz
Phase Modulation	Modulation Phase	0°~360°	0°~360°
	Modulation Rate	20 Hz ~1 MHz	1 Hz ~1 MHz
Frequency Modulation	Frequency Offset	5 MHz	5 MHz
	Modulation Rate	20 Hz~1 MHz	1 Hz ~1 MHz
Digital Modulation, supporting internal and external modulation sources			
IQ Modulator		/	Support
Internal Source		ASK/2FSK/4FSK/8FSK/2PSK/4PSK/8PSK	Supports universal digital modulation (option)
External Sources		/	Arb Mode (IQ data), Data Rate: 1 ksp/s~20 Msp/s
Pulse Modulation	Break-make Ratio	≥70 dB	
	Pulse Cycle Range	300 ns~160 s	
	Pulse width	200 ns~85 s	
Linear Frequency Modulation	Sweep Maximum Range	20MHz	
	Sweep Time	1 μs~1 s	
Frequency Upper Conversion	Input IF frequency range	200 MHz ± 10 MHz	
	Input IF power range	-50dBm ~ 0dBm	
	Output frequency range	61MHz ~ 6GHz	
	Output power range	-120dBm ~ +10dBm	
Interface			
RF Output Interface		N type 50ohm	
LF Output		BNC 50ohm	
Functional Interface	Interface Name	External Intermediate Frequency Input, External Pulse Modulation Input, External Trigger Input, External Modulation Input, 10 M Reference Input/Output, Internal Trigger Output, Internal Pulse Output, Scanning Synchronization Output	
	Interface Type	BNC	
LAN		10/100 Base T (Rear Panel)	
USB		USB 2.0	
General Properties			
Dimension (W x D x H)		430mm×380mm×100mm	
Weight		Approx. 5Kg	
Operating Temp.		-10℃ ~ +45℃	
Storage Temp.		-20℃ ~ +70℃	
Power Supply		110 ~ 240V 50/60Hz	

■ Ordering Information

Model

Model	Name	Description
SG2060A	Multi-standard Signal Generator	9 kHz to 6 GHz
SG2060B	Multi-standard Signal Generator	9 kHz to 6 GHz, built-in IQ modulator

Standard

No.	Name	Description
1	Power Cord	Standard three core power cord
2	Product certificate	

Options

Option Model	Name
BBG	Internal baseband data generation
RFUC	RF upconversion device
AMK	Amplitude modulation option (SSB/DSB/CW)
OCXO ¹	High stability time base option
PMC	Power meter control kit
RMK	Rack Mount Kit
LFM	Linear frequency modulation function

Notes:

1. This option can only be assembled and calibrated at the manufacturer's location



Maxwellon Electronic Instruments Co.,LTD.

Factory: No.6 Xiangjiang Road, Qingdao 266000, China
Tel: 0086 13816527810

Sales Office: NO.153 Zhuzhou Rd.,Laoshan District, Qingdao 266100, China.
Tel: 0086-532-80977508
Fax: 0086-532-80977508

Sales: Sales@Maxwellon.com
Web: www.maxwellon.com