SGM150/SGM200 Signal Generator Module

Datasheet

Saluki Technology Inc.

The document applies to the instruments of the following models:

- SGM150 signal generator module (100kHz - 15GHz)
- SGM200 signal generator module (9kHz - 20GHz)

Standard Accessories of SGM150/SGM200 Signal Generator Module:

Item	Name	Qty
1	Main Machine	1 Set
2	Power Adapter	1 pcs
3	CD (Manual)	1 pcs

Preface

Thanks for choosing Saluki Technology Inc instrument. We devote ourselves to meeting your demands, providing you high-quality measuring instrument and the best after-sales service. We persist with “superior quality and considerate service”, and are committed to offering satisfactory products and service for our clients.

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SGM150/SGM200-02-01

Version

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Saluki Technology

Authorization

The information contained in this datasheet is subject to change without notice. The power to interpret the contents of and terms used in this document rests with Saluki.

Product Quality Assurance

The warranty period of the product is 18 months from the date of delivery. The instrument manufacturer will repair or replace damaged parts according to the actual situation within the warranty period. The user should return the product to the manufacturer and prepay mailing costs. The manufacturer will return the product and such costs to the user after maintenance.

Product Quality Certificate

The product meets the indicator requirements of the document at the time of delivery. Calibration and measurement are completed by the measuring organization with qualifications specified by the state, and relevant data are provided for reference.

Quality/Settings Management

Research, development, manufacturing and testing of the product comply with the requirements of the quality and environmental management system.

Contacts

Service Tel:	886.909 602 109
Website:	www.salukitec.com
Email:	sales@salukitec.com
Address:	No. 367 Fuxing N Road, Taipei 105, Taiwan (R.O.C.)

Content

1. Overview

SGM150/SGM200 series signal generator module has ultra-wide frequency band, excellent performance and easy integration features. The module has a variety of practical functions such as continuous broadcast signal, analog modulation, pulse modulation, amplitude/frequency scanning and low-frequency function model output, which means it has high-cost performance.

The module height is standard 1U, suitable for system integration and desktop test and measurement equipment. Complete standard SCPI command set and general LAN interface bring you great convenience for remote control and secondary development.

Key Features:

- Frequency range: 100kHz-15GHz/9kHz-20GHz
- Typical output power: -120dBm to +10dBm
- Output power -120dBm to +10dBm
- Support various analog modulation AM/FM/M, support external waveform modulation
- Support pulse modulation, up to 70dB on-off ratio
- Support linear frequency modulation, can simulate radar signals
- Provide internal modulation sources: sine wave, square wave, triangle wave
- Standard LAN interface, providing standard SCPI command set
- Low power consumption, light weight and compact size, suitable for system integration and installation

2. Specification Details

2. 1. Frequency

	SGM150	SGM200
Frequency Range	100kHz - 15GHz	9kHz - 20GHz
Frequency Resolution	0.01Hz	
Reference Frequency	10MHz	
Temperature Stability	±1.0ppm (typ.)	
Internal Reference Output	10MHz, ≥+8dBm (typ.)	

2. 2. Spectral Purity

Spectral Purity Specifications		
SSB Phase Noise	f = 1GHz	-115dBc/Hz@10kHz
Harmonic	≤ -30dBc (typ.)	

Non-Harmonic	≤ -60dBc (typ.)

2. 3. Amplitude

	SGM150	SGM200
Output Power Range	Max: +10dBm Min: -120dBm	
Power Accuracy	≤ ±1.0dB (ALC. Open)	

2. 4. Amplitude/ Frequency Scan

	SGM150	SGM200
Scan Type	Step scan, List scan	
Scan Range	The instrument is set within the frequency/amplitude range	
Step Change	linear change	
Scan Points	Step scan: 2~65535; list scan: 2~16383	
Dwell Time	10ms~50s	
Trigger Mode	Auto, External, Button	

2. 5. Internal Modulation Source (LF)

Waveform	Sine, square, triangle	
Frequency Range	Sine	1Hz - 500kHz
	Triangle	1Hz - 100kHz
	Square	1Hz - 20kHz
Output Level	0.2Vp-p ~ 2Vp-p	

2. 6. Modulation

Analog modulation (AM/FM/ΦM): support internal/external modulation source.

		SGM150	SGM200
AM	Modulation Depth	0 -90%	
	Modulation Rate	10Hz - 20kHz	
FM	Frequency Offset	N*×64MHz	

	Modulation Rate	10Hz - 200kHz
ΦM	Modulation Phase	N×6rad
	Modulation Rate	10Hz - 200kHz

Digital modulation: support internal/external modulation source

	SGM150	SGM200
IQ Modulator	Nonsupport	Support
Internal Source	ASK/2FSK/4FSK/8FSK/2PSK/4PSK/8PSK	Standard digital modulation
External Source	Modulation sequence	Arb (I/Q data)
Modulation Rate	1Hz - 1MHz	10kHz - 20MHz

Pulse modulation

	SGM150	SGM200
Break-make Ratio	≥ 70dB	
Pulse Period	400ns - 160s	
Pulse Width	200ns - 85s	

2. 7. Interfaces

	SGM150	SGM200
RF Output	SMA , 50Ω	
LF Output	SMA , 50Ω	
Functional Interface	Type: SMA	
LAN	10/100 Base-T	

2. 8. General

	SGM150	SGM200
Operating Temperature	-10℃ to +45℃	
Storage Temperature	-40℃ to +70℃	
Power Supply	Voltage +12VDC ±5%, Current 2A	
Dimension	245(W) × 190 (D) × 44 (H) mm	

Weight	1.5kg

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