LSG006 Signal Source

Datasheet

Saluki Technology Inc.

The document applies to the signal generator of the following models:

- LSG006 signal source (100 kHz - 6 GHz).

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Saluki Technology

Document Authorization

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Product Quality Assurance

The warranty period of the product is three years from the date of delivery. The instrument manufacturer will repair or replace damaged parts according to the actual situation within the warranty period.

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.

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Contents

Definitions

Specifications describe the performance of a model under stated operating conditions and are covered by the model warranty.

Typical (typ) describes additional product performance information that is not covered by the product warranty. It is performance beyond specifications that 80 percent of the units exhibit with a 90 percent confidence level at room temperature (approximately 25 °C). Typical performance does not include measurement uncertainty.

Nominal (nom) values indicate the expected mean or average performance, or an attribute whose performance is by design. This data is not warranted and is measured at room temperature (approximately 25 °C).

Measured (meas) describes an attribute measured during the design phase for purposes of communicating expected performance. This data is not warranted and is measured at room temperature (approximately 25 °C).

Frequency

Frequency range		
Frequency range	100 kHz to 6 GHz	
Resolution	2 Hz	
Frequency switching speed		
Typical value	≤ 10 ms	
Frequency reference		
Short-term stability	± 5ppm@25℃ (Typical value)	
Long-term stability	≤ 1ppm/year (Typical value)	
Frequency segment		
Frequency band	Frequency range	Frequency factor
1	100 KHz to 200 MHz	0.25
2	350MHz to 400 MHz	0.0625
3	400 MHz to 500 MHz	0.125
4	500 MHz to 800 MHz	0.125
5	800 MHz to 1200 MHz	0.25
6	1200 MHz to 1600 MHz	0.25
7	1600 MHz to 1900 MHz	0.5
8	1900 MHz to 3000 MHz	0.5
9	3000 MHz to 3200 MHz	0.5
10	3200 MHz to 4500 MHz	1
11	4500 MHz to 6000 MHz	1
Frequency Sweep		
Operating method	Step sweep (equal interval frequency step)	
Scan mode	Continuous mode	
Scan range	Operating frequency range	
Sweep waveform	Triangle wave, sawtooth wave	
Dwell time	10 ms to 999 ms	
Number of points	2 to 65535	
Step change	Linear	
Trigger mode	Internal	

Amplitude

Output parameters		
Resolution	1 dB	
Accuracy	±1 (Typical value)	
Setting time	≤1ms	
Max output power		
Frequency	**Indicator level**	**Set level**
100 kHz to 10 MHz	0 dBm	+14 dBm
10 MHz to 200 MHz	+10 dBm	+14 dBm
200 MHz to 5 GHz	+14 dBm	+14 dBm
5 GHz to 6 GHz	+12 dBm	+14 dBm
Min output power		
Frequency	**Indicator level**	**Set level**
100 kHz to 10 MHz	-76 dBm	-76 dBm
Amplitude scan		
Operating method	Step sweep (amplitude stepping at equal intervals)	
Scan mode	Continuous mode	
Scan range	-50 dBm to +10 dBm	
Sweep waveform	Triangle wave, sawtooth wave	
Dwell time	10 ms to 999 ms	
Number of points	2 to 65535	
Step change	Logarithm	
Trigger mode	Internal	

Spectral Purity

Standard absolute SSB phase noise (dBc/Hz, CW)	
1GHz@100Hz Offset	≤ -90
1GHz@1kHz Offset	≤ -105
1GHz@10kHz Offset	≤ -115
1GHz@100kHz Offset	≤ -115
1GHz@1MHz Offset	≤ -137
Harmonics suppression	
+10dBm output power	≤ -15 dBc
0dBm output power	≤ -30 dBc
Clutter suppression	
+10dBm output power	≤ -50 dBc
0dBm output power	≤ -60 dBc

Signal Modulation

LFM	
Frequency range	Except Band 1
Power range	-50 dBm to +10 dBm
Pulse modulation (internal)	
Pulse width	$\geq$ 500 n
Duty cycle	$\geq$ 50%
Pulse trigger (edge)	
Pulse width	$\geq$ 500 n
Trigger delay	700 ns
Pulse trigger (level)	
Level dwell	$\geq$ 10 us
Trigger delay	700 ns

General Data

Port Tolerance	
RF terminal	
DC voltage	0VDC
Reverse power	$\leq$ +20 dBm
Load impedance	50 Ω
Trigger terminal	
Digital level	
Load impedance	$\geq$ 1 MΩ
Environmental	
Power supply	
Voltage	+5VDC $\pm$5%
Power supply current	$\leq$ 500
Operation environment	
Operation temperature	0℃ to 45℃
Relative humidity	$\leq$ 90%
Dimensions	
135.5mm×43mm×16mm	
Weight	
$\leq$ 200g	
ISO compliant	
This instrument is manufactured in an ISO-9001 registered facility in concurrence with Saluki Technology commitment to quality.	

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