DATA SHEET

LPG Series Signal Generators

LPG006 Analog

1 MHz to 6 GHz

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Definitions

The technical specifications of the analog signal source apply under the following conditions:

The technical specifications of the product are applicable when it is within the calibration cycle, stored for at least 2 hours in an environment with a temperature range of 0°C to 45°C and a relative humidity not exceeding 90%, and preheated for no less than 30 minutes after being turned on. For the data in this manual, unless otherwise specified, all technical indicators include measurement uncertainty.

Specification (Spec) represents warranted performance of a calibrated instrument that has been stored for a minimum of 2 hours within the operating temperature range of 0 to 55 °C, unless otherwise stated, and after a 45 minutes warm-up period. The specifications include measurement uncertainty. Data represented in this document are specifications unless otherwise noted.

Typical (typ) describes the performance that 80% of the measurement results can achieve under room temperature conditions (approximately 25°C). This parameter is not a guaranteed data point and does not include the uncertainty of measurement.

Nominal (nom) values represent the expected average performance or design performance characteristic, such as a 50Ω connector, and is measured under room temperature (approximately 25°C) conditions.

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 indicator	
Frequency range	1MHz to 6GHz
Resolution	1kHz
Signal establishment time	≤10ms (Typical)
Frequency accuracy	±1ppm
Short-term stability	±5ppm@25℃(Typical)
Long-term stability	≤1ppm/year（Typical）

Frequency segmentation information		
No	**Frequency range**	**Frequency coefficient N**
1	1MHz~200MHz	0.25
2	350MHz~400MHz	0.0625
3	400MHz~800MHz	0.125
4	800MHz~1600MHz	0.25
5	1600MHz~3200MHz	0.5
6	3200MHz~6000MHz	1

Frequency scanning	
Scanning method	Equal interval frequency stepping
Scanning range	Working frequency range
Scanning method	Triangle wave/ Sawtooth wave
Scanning dot number	Maximum 60,000
Dwell time	10ms to 999ms
Trigger method	Internal

Spectral Purity

Harmonic suppression	0dBm Output power	≥40dBc
Clutter suppression	+10dBm Output power	≥50dBc (Nominal)
	0dBm Output power	≥60dBc (Nominal)
Single-sideband phase noise [1]	1GHz@100Hz Offset	≤-80dBc/Hz (Nominal)
	1GHz@1kHz Offset	≤-95dBc/Hz (Nominal)
	1GHz@10kHz Offset	≤-105dBc/Hz
	1GHz@100kHz Offset	≤-112dBc/Hz (Nominal)
	1GHz@1MHz Offset	≤-130dBc/Hz (Nominal)

Note：[1] The indicator is measured at an output of 0dBm.

Amplitude

Output amplitude		
Maximum output power	1MHz~3MHz	+0dBm
	3MHz~10MHz	+10dBm
	10MHz~6GHz	+14dBm
Minimum output power	1MHz~6GHz	-76dBm (Typical)
Amplitude resolution	1dB	
Amplitude accuracy	±1dB (Typical); ±1.5dB (Spec)	
Amplitude setting time	≤1ms	
Amplitude scanning		
Scanning method	Equal interval amplitude (dB) stepping	
Scanning range	-50dBm to +10dBm (Nominal)	
Scanning method	Triangle wave/ Sawtooth wave	
Scanning dot number	Maximum 60,000	
Dwell time	10ms to 999ms	
Trigger method	Internal	

Other

Signal modulation		
Pulse Modulation (internal)	Pulse width	≥500ns
	Duty cycle	≥50%
Pulse Trigger (level)	Pulse width	≥600ns
	Trigger delay	700ns
	Trigger level	TTL，LVTTL
Port electrical specifications		
RF Terminal	Withstand DC Voltage	0VDC
	Withstand Reverse Power	≤+20dBm
	RF Impedance	50Ω
Trigger Terminal	Voltage Withstand	5.5VDC
	Input Impedance	≥1MΩ
General specification		
Working power	Power supply voltage	+5VDC±5%
	Power supply current	≤500mA [2]
Working environment	Working temperature	0℃~45℃
	Relative humidity	≤90%

Size & Weight	
Size	Length: 135. 5㎜±1㎜ Width: 43㎜±1㎜ Height: 16㎜±1㎜
Weight	≤200g

Note：[2] When the output radio frequency power is greater than 10dBm, or when operating in frequency No.1, the current may reach 550mA.