

S1101A/B RF Signal Generator

(Frequency Range: 250kHz - 6GHz / 3GHz)

Key Features

- Frequency range: 250kHz - 6GHz / 3GHz
- Extremely low phase noise and high pure spectrum
- Power output of -135dBm to +7dBm
- Available in abundant analogy modulation and digital modulation functions
- List sweep and step sweep
- Update with USB Disk

Typical Applications

- Consumer electronics development
- Manufacturing
- Service maintenance
- RF education

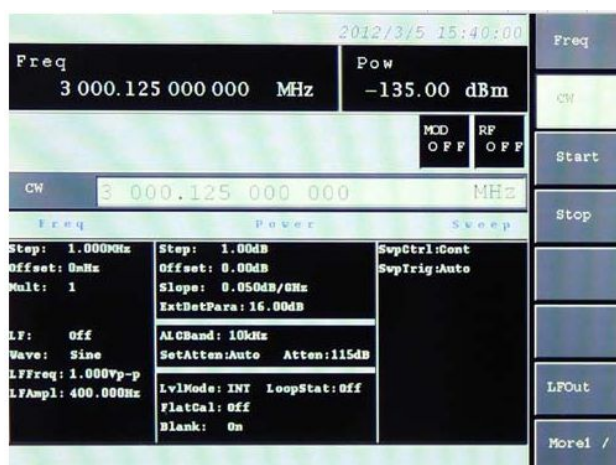


The S1101A /S1101B is a RF signal generator covering a frequency range from 250 kHz to 6 GHz / 3 GHz. With extremely low phase noise of output signal, accuracy frequency resolution, wide output dynamic range, and multiple built-in functions, it is widely used for R&D, manufacturing, education, and service maintenance.

Features To Boost Your Efficiency

Large LCD operation interface

Designed with completely independent software, S1101 Series RF Signal Generator uses large screen interfaces which offers a panoramic view of the current state.



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Technical Specifications

Frequency Range	S1101A: 250kHz - 6GHz S1101B: 250kHz - 3GHz		Frequency		N	
			250 kHz ≤ f ≤ 250 MHz		1	
			250 MHz <f ≤ 500 MHz		0.5	
			500 MHz <f ≤ 1 GHz		1	
			1 GHz <f ≤ 2 GHz		2	
			2 GHz <f ≤ 3.2 GHz		4	
			3.2 GHz <f ≤ 6 GHz		8	
Frequency Resolution			0.01Hz (0.001Hz is also available)			
Timebase Aging Rate (typical value)			1×10 ⁻⁹ /day (after 7 days of continuous power on)			
Sweep Mode			Step Sweep, List Sweep			
Harmonic			< -30 dBc			
Sub-harmonic			None			
Non-harmonic			< -62 dBc			
SSB Phase Noise (dBc/Hz)	Freq. offset Frequency		100Hz	1kHz	10kHz	100kHz
	250kHz ≤ f ≤ 250MHz		<-91	<-107	<-125	<-127
	250MHz <f ≤ 500MHz		<-97	<-121	<-129	<-133
	500MHz <f ≤ 1GHz		<-91	<-115	<-127	<-127
	1 GHz <f ≤ 2 GHz		<-85	<-110	<-121	<-121
	2 GHz <f ≤ 3GHz		<-81	<-106	<-117	<-117
	3 GHz <f ≤ 6GHz		<-75	<-100	<-111	<-111
Residual FM (typical value)			< N×1Hz(Typical value, frequency mode, 300Hz-3kHz, bandwidth RMS)			
Output Power Range (25±10℃)			-20dBm ~ +7dBm Adding option 1: -120dBm ~ +7dBm (-135dBm is also available)			

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Power Accuracy (25℃ ±10℃)	When option 1 programmable step attenuator is not available			
	-10dBm ~ +7dBm		-20dBm ~ -10dBm	
	±0.8dB		±1.0dB	
	When option 1 programmable step attenuator is available			
	-10dBm ~ +7dBm	-60dBm ~ -10dBm	-90dBm ~ -60dBm	-120dBm ~ -90dBm
	±0.8dB	±1.0dB	±1.5dB (Typical)	±3.0dB (Typical)
Modulation Performance	Pulse	Pulse modulation on / off ratio		>60dB
	Modulation	Pulse modulation rise / fall time		<150ns
		Internally leveled min. pulse width		2μs
		Level hold (ALC is off)		0.5μs
	Amplitude Modulation	Modulation mode		Exponential mode Linear mode
		Modulation rate (3 dB bandwidth, 30% modulation depth)		DC - 100kHz

Modulation Performance	Amplitude Modulation	Max. amplitude modulation depth	Exponential : 20dB Linear: 90%
		Accuracy (1kHz modulation rate 300Hz~3kHz demodulation bandwidth, depth<90%).	±(6%×set value+1%)
		Distortion (1kHz modulation rate 30% depth, linear mode, total harmonic distortion)	<1.5%
	Frequency Modulation	Max. frequency modulation offset	N×1MHz (Typical Value)
		Accuracy: (1kHz modulation rate, 300Hz~3kHz demodulation bandwidth, 1kHz <frequency offset <N×100kHz, except residual frequency modulation)	±(5%×set value +20Hz)
		Modulation rate (3 dB bandwidth, 100kHz offset)	Internal: DC - 100MHz 100kHz - 1MHz External: DC - 100MHz 100kHz - 10MHz

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Modulation Performance	Frequency Modulation	Distortion (1kHz modulation rate, N×100kHz frequency modulation offset, total harmonic distortion)	<1%
	Phase Modulation	Max. phase modulation offset	N×10rad (100kHz modulation bandwidth) N×1rad (1MHz modulation bandwidth)
		Accuracy (1kHz modulation rate, 300Hz~3kHz demodulation bandwidth, 1rad <phase modulation offset <N×10rad, except residual phase modulation, 100kHz modulation bandwidth)	±(5%×set value+0.01rad)
		Modulation rate (3 dB bandwidth)	DC - 100kHz (100kHz modulation bandwidth) 100kHz - 1MHz (1MHz modulation bandwidth)
		Distortion (1kHz modulation rate, N x 10rad phase offset, total harmonic distortion, 100kHz modulation bandwidth)	<1%
	Vector Modulation Module (Vector Modulation Module must be configured)	Operating mode	external I / Q input
		Input connector	BNC (female)
		Input impedance	50 Ω
		Frequency modulation range (typical value, 3dB point)	DC -10MHz
		Vector accuracy (typical value, 4Msps, QPSK modulation mode, Nyquist filter, α=0.3) EVM (rms)	<3%
		Phase error (rms)	100MHz - 3.2GHz <2° 3.2GHz - 6GHz <3°

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Internal Modulation Signal Generator	Function generator provides	Amplitude modulation, Frequency / Phase modulation signals
	Waveform	Sine wave, Square wave, Triangular wave, Ramp wave, Noise, Dual-sine, Swept-sine
	Frequency range	Sine wave, Dual-sine, Swept-sine: 1Hz -1MHz Square wave, Triangular wave, Ramp wave: 1Hz - 100kHz Resolution: 1Hz
	Pulse modulation signal	Pulse width: 40ns - (42s - 20ns) Pulse period: 100ns- 42s Resolution: 20ns
Base-band Signal Generator	Max. symbol rate: 10ksps -10Msps(MSK;2FSK Max. symbol rate 2Msps) Modulation format: BPSK、QPSK、OQPSK、8PSK、MSK、16QAM、2FSK	
RF Output Port	N (F)	
Display	TFT-LCD	

General Information

Dimension (W×H×L)	482mm×152mm×582mm
Max. Weight	Approx. 23kg
Power Consumption	300W (Max)
Power Supply Mode	220V AC
Environmental Adaptation	Operating temp.: 0℃ ~ +40℃ (32°F - 104°F) Storage temp.: -30℃ ~ +70℃ (-22°F - 158°F) (Low temperature is subject to the LCD) Relative humidity: 5% - 95%, ±5%RH

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Standard Package

Item	Name	Qty
1	RF Signal Generator	1 Set
2	User Guide (programming manual included)	1 PC
3	Standard three-wire power cord	1 Set
4	Calibration cable	1 PC

Main machine

S1101A RF Signal Generator	250kHz - 6GHz
S1101B RF Signal Generator	250kHz - 3GHz

Optional Accessories

No.	Name	Description
S1101-001	115dB programmable step attenuator	Expand power
S1101-002	Vector modulation module	Generate vector modulation signal ,must work with base-band signal generator
S1101-003	Base-band signal generator	With internal base-band signal generation function, shall work with vector modulation module
S1101-005	Aluminum case	With handle and wheels for easy transportation
S1101-006	Cabinet	Building a testing system

Note: Information will conduct the necessary updates, the contents of this document are subject to change without notice