Sinolink Technologies

-Your Exceptional RF Team

Multi-Channel Phase-Coherent Signal Generator





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Multi-Channel Phase-Coherent Signal Generator

Multi-channel phase-coherent signal generator is a phase-coherent, and low phase noise signal generator. With 2-5 channels frequency range from 10MHz to 40GHz, with frequency resolution as low as 0.01 Hz. The instruments support narrow pulse modulation. Output power level range from -110dBm to +15dBm, Every channel can be independently fully adjusted.

The instrument comes in a standard 2U/3U rack-mount form and offers LAN control interface, which allows easy and fast communication. Remote control of the instrument can be quickly attained from any host system. Application programming interface (API) or programming examples make the control implementation very easy.

Features:

- Frequency range: I 0MHz-40GHz
- 2-5 RF output channels which can operate individually
- Phase coherent among every channel
- Channel to channel Relative Phase drift (10GHz, 24h) $\leq \pm 1^{\circ}$
- Low phase noise, high output power
- Narrow pulse modulation
- Fast frequency switching time

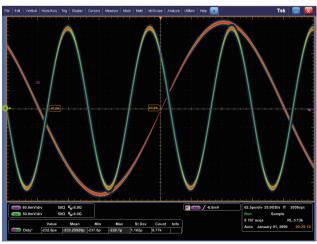
Applications:

- R&D low noise microwave generator
- Local Oscillator Replacement
- Component Test
- Receiver Sensitivity Test

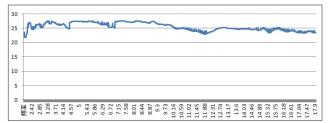


Specifications

OutputModelSFL440D/SLFS4440T etc.Frequency range10MHz-20/40GHzEach channel can be differentOutput channel2-5ChFrequency resolution0.01HzMax output power+13dBm @10MHz-20GHzMin output power-110dBmPower resolution0.01dBPower level uncertainty≤±1.3dB @>-20dBm≤±3dB @≤-70dBm≤±3dB @≤-70dBm≤±3dB @≤-70dBm≤-65dBc @10MHz~12GHz≤-65dBc @12GHz~20GHz≤-60dBc @20GHz~40GHzHarmonic spurious≤-50dBc @10dBm outputChannel to channel isolation≥80dBPulse modulationMinimum pulse width 50ns≤-86dBc/Hz@100Hz≤-108dBc/Hz@10KHz≤-116dBc/Hz@10KHz≤-116dBc/Hz@10KHz≤-120dBc/Hz@10MHz≤-140dBc/Hz@10MHz			
Frequency range Coutput channel Coutput ch	Output		
Each channel can be different Output channel 2-5Ch Frequency resolution 0.01Hz +15dBm @10MHz-20GHz Hi3dBm @20GHz-40GHz Min output power -110dBm Power resolution 0.01dB ≤±1.3dB @>-20dBm ≤±1.5dB @-20~-70dBm ≤±3dB @≤-70dBm ≤±3dB @≤-70dBm ≤-65dBc @10MHz~12GHz ≤-65dBc @12GHz~20GHz ≤-60dBc @20GHz~40GHz 4-65dBc @10dBm output S-50dBc @10dBm output Channel to channel isolation Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@100KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-120dBc/Hz@10MHz	Model		SFL440D/SLFS4440T etc.
Output channel 2-5Ch Frequency resolution 0.01Hz H 15dBm @10MHz-20GHz Max output power +13dBm @20GHz-40GHz Min output power -110dBm Power resolution 0.01dB Power level uncertainty ≤±1.3dB @>-20dBm ≤±1.5dB @-20~-70dBm ≤±3dB @≤-70dBm ≤+3dB @≤-70dBm ≤-65dBc @10MHz~12GHz ≤-65dBc @12GHz~20GHz ≤-65dBc @12GHz~40GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @10dBm output Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-120dBc/Hz@10MHz ≤-120dBc/Hz@1MHz	Frequency range	/	10MHz-20/40GHz
Frequency resolution O.01Hz + 15dBm @ 10MHz-20GHz Min output power Power resolution Power level uncertainty Signature of the provided and the power of the			Each channel can be different
Max output power +15dBm @10MHz-20GHz Min output power -110dBm Power resolution 0.01dB Power level uncertainty ≤±1.3dB @>-20dBm ≤±1.5dB @-20~-70dBm ≤±3dB @<-70dBm	Output channel		2-5Ch
Max output power +13dBm @20GHz-40GHz Min output power -110dBm Power resolution 0.01dB ≥±1.3dB @>-20dBm ≤±1.5dB @-20~-70dBm ≤±3dB @≤-70dBm ≤+3dB @≤-70dBm ≤-70dBc @10MHz~12GHz ≤-65dBc @12GHz~20GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @10dBm output Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-120dBc/Hz@10MHz ≤-120dBc/Hz@11MHz	Frequency resolution		0.01Hz
Min output power -110dBm Power resolution 0.01dB Power level uncertainty ≤±1.3dB @>-20dBm ≤±1.5dB @-20~-70dBm ≤±3dB @≤-70dBm ≤±3dB @≤-70dBm ≤-65dBc @10MHz~12GHz ≤-65dBc @12GHz~20GHz ≤-65dBc @12GHz~20GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @20GHz~40GHz Harmonic spurious ≤-50dBc @10dBm output Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@10KHz ≤-120dBc/Hz@10MHz			+15dBm@10MHz-20GHz
Power resolution $0.01dB$ Power level uncertainty $\leq \pm 1.3dB$ @>-20dBm $\leq \pm 1.5dB$ @-20~-70dBm $\leq \pm 3dB$ @<-70dBm	Max output power		+ 13dBm @20GHz-40GHz
Power level uncertainty	Min output power		-110dBm
Power level uncertainty $ \leq \pm 1.5 dB @-20 \sim -70 dBm $ $ \leq \pm 3 dB @ \leq -70 dBm $ $ \leq \pm 3 dB @ \leq -70 dBm $ $ \leq -70 dBc @10 MHz \sim 12 GHz $ $ \leq -65 dBc @12 GHz \sim 20 GHz $ $ \leq -60 dBc @20 GHz \sim 40 GHz $ $ \leq -60 dBc @20 GHz \sim 40 GHz $ $ \leq -50 dBc @10 dBm output $ $ \leq -50 dBc @10 dBm output $ $ \geq 80 dB $ $ Minimum pulse width 50 ns $ $ \leq -86 dBc/Hz@100 Hz $ $ \leq -108 dBc/Hz@10 KHz $ $ \leq -116 dBc/Hz@10 KHz $ $ \leq -116 dBc/Hz@100 KHz $ $ \leq -120 dBc/Hz@100 KHz $ $ \leq -120 dBc/Hz@10 MHz $	Power resolution		0.01dB
$ = \pm 1.5 dB @-20 \sim -70 dBm $ $ \leq \pm 3 dB @ \leq -70 dBm $ $ \leq \pm 3 dB @ \leq -70 dBm $ $ \leq -70 dBc @ 10 MHz \sim 12 GHz $ $ \leq -65 dBc @ 12 GHz \sim 20 GHz $ $ \leq -60 dBc @ 20 GHz \sim 40 GHz $ $ \leq -60 dBc @ 10 dBm output $ $ Channel to channel isolation $	Power level uncertainty		≤±1.3dB @>-20dBm
Non-harmonic spurious			≤±1.5dB @-20~-70dBm
SSB (10GHz) ≤-65dBc @12GHz~20GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @20GHz~40GHz ≤-60dBc @10dBm output ≥80dB Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@10MHz			≤±3dB @≤-70dBm
 ≤-65dBc @12GHz~20GHz ≤-60dBc @20GHz~40GHz ≤-50dBc @10dBm output Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz 	Non-harmonic spurious		≤-70dBc @10MHz~12GHz
Harmonic spurious ≤-50dBc @10dBm output Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz			≤-65dBc @12GHz~20GHz
Channel to channel isolation ≥80dB Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz			≤-60dBc @20GHz~40GHz
Pulse modulation Minimum pulse width 50ns ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz	Harmonic spurious		≤-50dBc @10dBm output
SSB (10GHz) ≤-86dBc/Hz@100Hz ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz	Channel to channel is	olation	≥80dB
SSB (10GHz) ≤-108dBc/Hz@1KHz ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz	Pulse modulation		Minimum pulse width 50ns
SSB (10GHz) ≤-116dBc/Hz@10KHz ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz	SSB (10GHz)		≤-86dBc/Hz@100Hz
SSB (10GHz) ≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz			≤-108dBc/Hz@1KHz
≤-116dBc/Hz@100KHz ≤-120dBc/Hz@1MHz			≤-116dBc/Hz@10KHz
			≤-116dBc/Hz@100KHz
≤-140dBc/Hz@10MHz			≤-120dBc/Hz@1MHz
			≤-140dBc/Hz@10MHz



Phase Synchronization



Maximum Output Power

Frequency reference

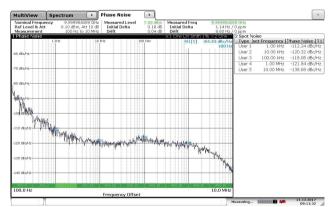
Internal reference frequency temperature stability	±5e-8 0°C∼+50°C	
Internal reference frequency	IOMHz	
Internal reference output pow	ver ≥5dBm	
External reference input level range	5∼10dBm	
Both external and internal reference supported		
SSB of internal reference	≤-125dBc/Hz@10Hz	
	≤-140dBc/Hz@100Hz	
	≤-150dBc/Hz@1KHz	
	≤-155dBc/Hz@10KHz	
	 ≤-155dBc/Hz@100KHz	

Environmental

Operational temperature	0°C~+50°C
Operational humidity	20%~80% (+30°C)

General

LAN control	RJ-45 (TCP/IP over Ethernet)
Power Supply	AC 176~264VAC, 45Hz∼65Hz
Dimension	483mm*89mm*559mm(2U)
	483mm*134mm*559mm(3U)
Weight	≤20kg
Warranty	Three-years parts and labor



Phase Noise @10GHz



Order Information

MODEL: SLFS440D/SLFS4440T/SLFS20T/SLFS4220D/SLFS40F

2-5Ch-output, phase-coherent, and low phase noise signal generator, The maximum output frequency of each channel can be configured flexibly.





For more information on Sinolink Technologies' products, applications or services please contact Sinolink Technologies (Beijing) Co., Ltd. The complete list is available at: www.sinolink-technologies.com



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3 Year Warranty The combination of superior product reliability and 3-year warranty service helps you achieve the following goals: increased measurement confidence, reduced cost of ownership, and increased ease of operation.