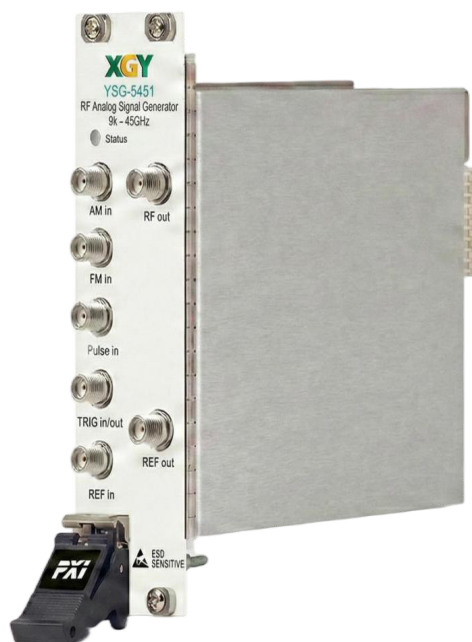


9k-45G Hz RF Signal Generator

At a Glance

YSG-5451 is a high-performance PXIe microwave analog signal generator. It features low phase noise and high output power, with a frequency coverage from 9 kHz to 45 GHz and fine frequency step resolution of up to 0.01 Hz. The instrument integrates narrow-pulse modulation capability, supporting a minimum pulse width of 100 ns. It provides highly accurate continuous-wave (CW) signals and fully supports a wide range of analog modulation modes, including amplitude modulation (AM), frequency modulation (FM), and phase modulation (PM). Based on a 2U dual-slot PXIe modular architecture, the YSG-5451 enables seamless multi-channel expansion on the PXI platform, with independent frequency and power control for each channel, making it a highly cost-effective modular microwave analog signal generator.



High-End RF Performance

- 9kHz - 45GHz ultra-wide range
- 0.01Hz ultra-fine frequency step
- -100dBm to +10 dBm wide power output
- 0.01dB high-resolution power step
- ± 1 dB strict power accuracy (ALC)

Superior Signal Purity

- -105 dBc/Hz @10kHz low phase noise
- ≤ -60 dBc low spurious response
- ≤ -30 dBc low harmonic levels
- High stability frequency locking

Advanced Pulse & Modulation

- 100ns minimum pulse width
- ≥ 70 dB high pulse on/off ratio
- 5ns precision trigger lead time
- 12Multi-waveform internal modulation source

Modular PXIe Architecture

- Dual-slot 3U PXIe compact design
- Multi-channel independent scalability
- 10MHz/100MHz clock synchronization
- High-efficiency ATE system integration

Specifications

Key Parameters	
Output Channels	1
Frequency Range(Hz)	9k-45G
Frequency Step(Hz)	0.01
Max RF Output Power(dBm)	10
Min RF Output Power(dBm)	-100
Power Step(dB)	0.01
Power Accuracy(dB)	$\leq \pm 1$ (with ALC on)
External Ref Input Freq(MHz)	10(sync capable)
External Ref Input Power(dBm)	0~5
Reference Output Freq(MHz)	10/100
Reference Output Power(dBm)	5 ± 1 dBm
Harmonic Distortion(dBc)	≤ -30 (at 0 dBm output)
Spurious Signals(dBc)	≤ -60 (at 0 dBm output)
SSB Phase Noise(dBc/Hz@10k)	-115 dBc@10GHz
Power Supply	220V(50W)
Operating Temp($^{\circ}$ C)	-10~+45
Storage Temp($^{\circ}$ C)	-40~+70
Amplitude Modulation(AM)	
Modulation Depth	0%~90%
Modulation Frequency Response	10Hz~20KHz
Frequency Modulation(FM)	
Maximum Frequency Deviation	NX32MHz(nominal)
Modulation Frequency Response	10Hz~200KHz
Pulse Modulation(PM)	
On/Off Ratio	≥ 70 dB
Pulse Width	100nS~50S
Pulse Period	100nS~50S
Interfaces	
RF Output	2.92,50 Ω
Reference Input/Output	SMA-K
FM/AM Input Interface	SMA-K
Program Control	PXIe