

Product Announcement

100 kHz to 26 GHz Low Phase Noise Microwave Source

APSIN26G

The APSIN26G is a low-noise and fast-switching microwave signal generator covering a continuous frequency range from 100 kHz up to 26 GHz.

Advanced technology allows a 0.001 Hz frequency resolution, fast switching, excellent phase noise and a high power output. APSIN26G operates with an ultra-stable temperature compensated 100 MHz reference (OCXO) and can be phase-locked to any external reference from 1 to 250 MHz.

Available also as truly portable model with internal rechargeable battery module, this instrument offers a reliable and powerful alternative to expensive high-end microwave signal generators, where small size and excellent microwave performance at an attractive cost is required.

+ IMPROVED PHASE NOISE

+ FASTER SWITCHING SPEED

+ MORE OUTPUT POWER



Key Features

- Only 250 μ s frequency switching time
- Very low SSB phase noise: -115 dBc/Hz at 10 GHz and 20 kHz offset
- Excellent phase coherence / phase stability
- Fast pulse and pulse train modulation
- LAN/USB/GPIB (optional) remote control with SCPI 1999 command set
- Powerful trigger and sweeping modes

Applications

- R&D low noise signal source
- Production testing (industry-leading switching times; high dynamic range)
- Service and maintenance
- Signal simulation (Radar, WiMax, UWB)
- Aerospace & Defence (Pulse modulator, Chirps)

Key Specifications (typical)

Parameter	Typical Value	Notes
Frequency range	100 kHz to 26 GHz	
resolution	0.001 Hz	
Phase resolution	0.1 deg	
Settling time	< 100 μ s	
SSB Phase noise		
at 20 kHz from carrier	-115 dBc/Hz	10 GHz carrier
wideband noise	-150 dBc/Hz	
Power Level Range	-20 to +26 dBm -80 to +23 dBm	standard options PE3
resolution	0.01 dB	
uncertainty	< 1.0 dB	0.2 dB typically
Output impedance VSWR	50 Ω 1.8	
Spectral purity output harmonics non-harmonic spurious	-45 dBc < -60 dBc	at +10 dBm
Sweeps & Trigger		
Dwell time	min 50 μ s	
Time resolution	10 μ s	
List size	20'000	
Trigger	auto, external, bus, gated	
Frequency Chirps		
	DC to 800 kHz	
	5 % of carrier	
	0.1 %	$f_{mod} = 1$ kHz & $f_{dev} = 10$ MHz
Amplitude Modulation		
Rate	0.1 Hz – 20 kHz	
Depth	0 to 95 %	
Pulse Modulation		
Rate	DC – 10 MHz	
On/OFF Ratio	80 dB	Pout = +10 dBm
Pulse width	25 ns	
Rise/Fall times	10 ns	
Internal reference frequency	10/100 MHz	
Temperature stability	\pm 100 ppb	0 to 50 $^{\circ}$ C