

## PHASE COHERENT – SPECTRALLY PURE

The HSX Series is a phase coherent CW signal source offering excellent spectral purity. Phase noise performance, spurious rejection and harmonic /sub-harmonic rejection were the primary focus points of the development cycle.

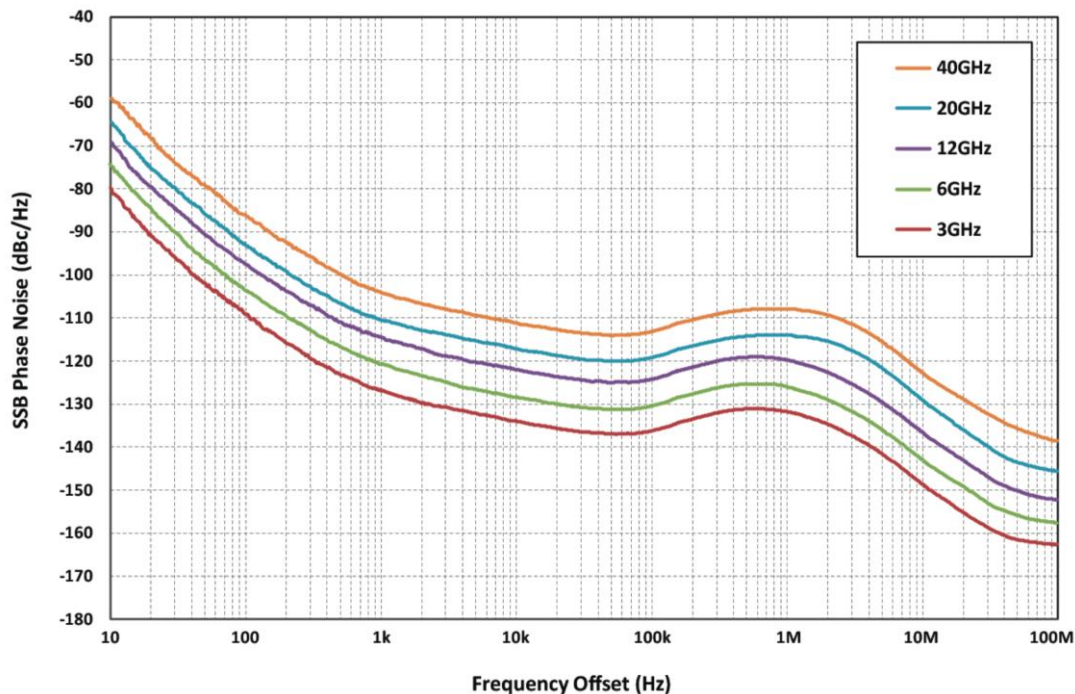
The HSX Series is available as a **10MHz to 3GHz, 6GHz, 12GHz, 24GHz or 40GHz** multi-channel CW source. This series of broadband frequency sources exhibit industry leading phase noise and spectral purity performance coupled with a highly accurate dynamic range of +20dBm to -110dBm. The 1U high form factor will be available in 1, 2, 3 or 4 channel models; all providing the ultimate in frequency accuracy, channel-to-channel stability and phase coherent channels. Users can also mix and match channel bandwidth options to optimize the price point for a given application.

## SPECTRAL PURITY SPECIFICATIONS

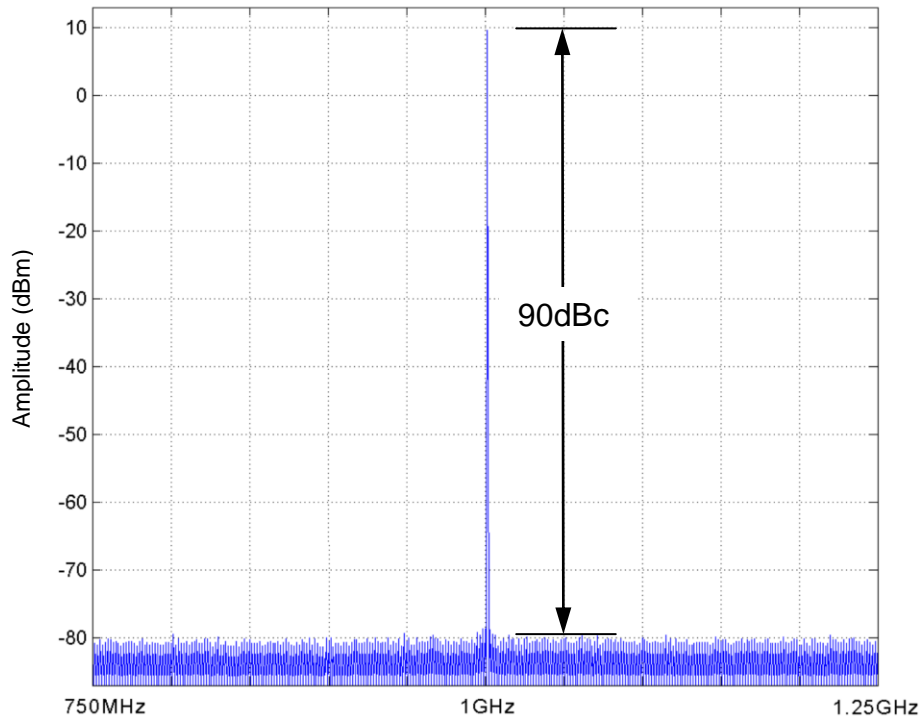
Bandwidth	Output Power (calibrated)	Phase Noise at Max. Frequency			Harmonics	Spurious (high band)
		10Hz offset	10kHz offset	10MHz offset		
10MHz to 3GHz	+20dBm to -110dBm	-82dBc/Hz	-136dBc/Hz	-148dBc/Hz	-30dBc	-85Bc
10MHz to 6GHz	+20dBm to -110dBm	-76dBc/Hz	-128dBc/Hz	-142dBc/Hz	-30dBc	-72dBc
10MHz to 12GHz	+20dBm to -60dBm	-70dBc/Hz	-122dBc/Hz	-136dBc/Hz	-35dBc	-67dBc
10MHz to 24GHz	+20dBm to -60dBm	-64dBc/Hz	-116dBc/Hz	-130dBc/Hz	-30dBc	-60dBc
10MHz to 40GHz	+20dBm to 0dBm	-58dBc/Hz	-112dBc/Hz	-124dBc/Hz	-30dBc	-53dBc

## PHASE NOISE PERFORMANCE

The HSX Series targets ultra low phase noise performance. The enhanced architecture maintains channel-channel phase coherency while optimizing both long term and short term stability.



## TYPICAL SPECTRAL PURITY (1GHz)



## ADDITIONAL SPECIFICATIONS

PARAMETER	MIN	TYPICAL	MAX	COMMENTS
Frequency Range	10MHz		3, 6, 12, 24, 40GHz	
Frequency Resolution	0.001Hz			
Switching Speed (Frequency)			5ms	
Output Power Range	-110 dBm		+20 dBm	Min calibrated level = -60dBm on 12, 24, & 40GHz
Interface	USB, Ethernet, RS-232, GPIB. Java™ application GUI, LabVIEW™, MATLAB™, C++, etc. (open DLL)			
Product dimensions	1U (1.75 in.) high. 17 in. wide. 15 in. deep. 19" rack mount kit available.			
Warranty	<b>3 years.</b> Full manufacturer's warranty against defects. Parts and Labor.			



## HSX9004A – 4 channel RF Synthesizer

### Phase Coherent, Independently Tunable Channels

# 3 YEAR FACTORY WARRANTY