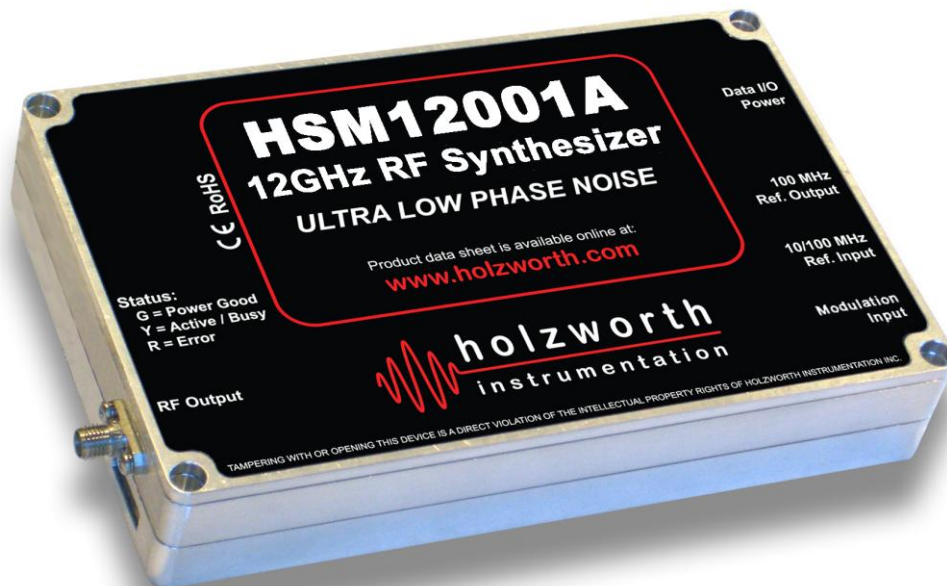


12GHz and 20GHz ADDITION TO HSM SERIES

The Holzworth HSM Series RF Synthesizer Modules eliminate the PLL to maximize stability and enable multi-channel phase coherency without compromising on spectral performance. The HSM12001A operates from 10MHz to 12GHz and the HSM18001A operates from 10MHz to 20GHz. Both high performance synthesizer modules deliver the same unparalleled level of frequency/phase stability that the Holzworth HSM Series is known for. These CW sources have been designed for ease of system integration having phase noise and spectral performance that surpasses that of high end bench top CW sources.



100% PHASE COHERENT CHANNEL-CHANNEL

AGILE SWITCHING SPEED: 6 μ S (5% BW)

100MHz INTERNAL PRECISION OCXO

REFERENCE INPUT: 10MHz/100MHz

> 200,000 Hours Calculated MTBF

SPI, USB or Ethernet I/O Interfacing

15W POWER CONSUMPTION (steady state)

FULL TWO YEAR FACTORY WARRANTY

SPECIFICATIONS *BETA*

PARAMETER	MIN	TYPICAL	MAX	COMMENTS
Frequency Range HSM12001A HSM18001A	10 MHz 10 MHz		12 GHz 20 GHz	
Frequency Resolution	0.01 Hz			
Phase Offset	-180 deg		+180 deg	
Switching Speed (Frequency) SPI Mode (ASCII) SPI Mode (Binary) List/Step Sweep Mode (WB) List/Step Sweep Mode (NB)			300 μ s 100 μ s 100 μ s 6 μ s	FINAL VALUES. NO SETTLING TIME. Wideband Steps (full bandwidth) Narrowband Steps (<5% bandwidth)
Output Power	-10 dBm		+10 dBm	
Resolution			0.01 dB	
Switching Speed (Amplitude) SPI Mode (Binary) List / Step Sweep Mode (NB)			100 μ s 6 μ s	Settling to within 0.1 dB
Absolute Level Accuracy 10 MHz – 6 GHz 6 GHz – 18 GHz		\pm 0.15 dB \pm 0.25 dB	\pm 0.5 dB \pm 1.0 dB	25C to 35C (case temperature)
SSB Phase Noise 2.0 GHz, 10kHz offset 4.0 GHz, 10kHz offset 8.0 GHz, 10kHz offset 12.0 GHz, 10kHz offset 18.0 GHz, 10kHz offset		\leq -128 dBc/Hz \leq -122 dBc/Hz \leq -114 dBc/Hz \leq -110 dBc/Hz \leq -106 dBc/Hz		Design goal: -128 dBc/Hz Design goal: -122 dBc/Hz Design goal: -116 dBc/Hz Design goal: -113 dBc/Hz Design goal: -109 dBc/Hz
Harmonics (CW mode)		-40 dBc	-30 dBc	
Non-Harmonics (CW mode)		-70 dBc	-60 dBc	
Sub-Harmonics (CW mode)		-70 dBc	-60 dBc	
Jitter (RMS) at 18GHz		55 fs		5kHz < BW < 20MHz
Dimensions	3.80 x 6.00 x 1.04 (inches), 96.5 x 152.4 x 26.4 (mm)			

