VIDA OSCILLATOR SERIES
HIGH PERFORMANCE YIG OSCILLATORS

www.vidaproducts.com

The VIDA family of YIG Oscillators is the foundation of many high data rate digital radios, SATCOM systems, and military/defense communications equipment. VIDA's patented technologies offer designers the broad tuning bandwidth, spectral purity, extended temperature performance, and microphonic/phase hit resistance required for today's high capacity communications systems.

Key Features

- Frequency Coverage from 5 to 14 GHz
- Broad Tuning Range of up to 2 GHz for maximum application flexibility.
- Outstanding spectral purity with typical phase noise performance of -125 dBc/Hz at 100 kHz offset facilitating high data rate modulation schemes.
- Industry leading microphonic and phase hit performance "designed in" with VIDA's patented and proprietary breakthrough technology.
- Board mountable packaging in the industry's smallest size (0.9 x 0.9 x 0.63 inches) for ease of implementation.
- No heater is required to achieve optimum temperature and noise characteristics, resulting in extremely low overall power consumption.
- Extended operating temperature range of -35 Degrees C to +70 Degrees C for demanding field applications.

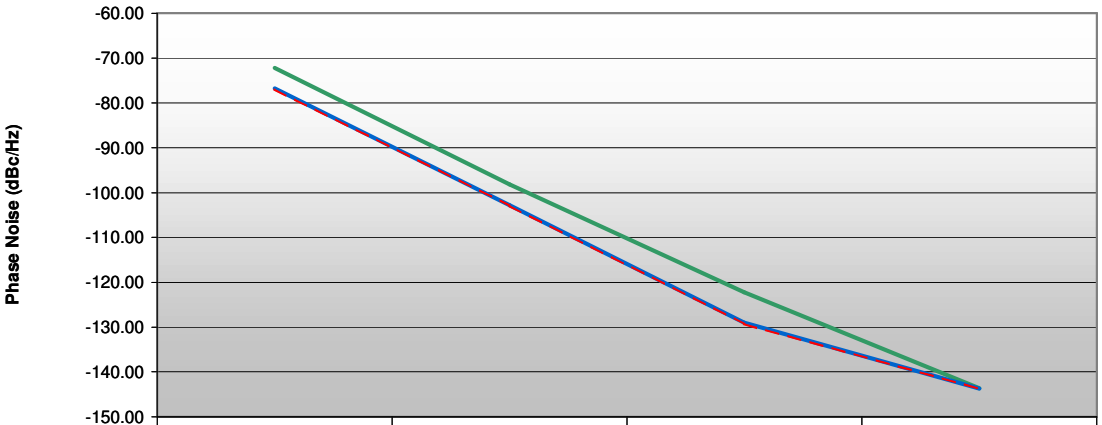
Technical Specifications

Performance Specifications

Metric	Units	Specification
Output Frequencies Available	GHz	5.8 - 13.4
Tuning Range	GHz	Up to 2
Quiescent Frequency	GHz	Customer Specified
Quiescent Frequency Tolerance	MHz	+/- 200
Nominal Output Power (Model Dependant)	dBm	8
Power Output Variation	dBm	+/- 3
Main Coil Sensitivity, Nominal	MHz/mA	24
FM Coil Sensitivity, Nominal	MHz/mA	0.82
SSB Phase Noise, 1 kHz Offset	dBc/Hz	<-70
SSB Phase Noise, 10 kHz Offset	dBc/Hz	<-94
SSB Phase Noise, 100 kHz Offset	dBc/Hz	<-120
SSB Phase Noise, 1 MHz Offset	dBc/Hz	<-140
Phase Hit Peak Deviation after 20 kHz first order HPF	Degrees	<5
Vibration Sensitivity (typical) -10 Hz to 5 kHz sinusoidal vibration rates	kHz/g	0.5
Vibration Sensitivity (maximum) -10 Hz to 5 kHz sinusoidal vibration rates	kHz/g	<3
Load Pull with 9 dB load Return Loss	MHz	<0.5
Bias Pushing	MHz/v	<-1
Harmonics	dBc	<-12
Spurious	dBc	<-68
DC Bias Voltage (Nominal)	V	3.6
DC Bias Current (Nominal)	mA	80
Operating Temperature (Ambient) with Heat Sinking and air flow limiting case temp to 5 degrees above ambient	^{o}C	0 to +75 Reduced Phase Noise Performance to -35^{o}C
Maximum Main Coil Current	mA	+/- 100
Maximum FM Coil Current	mA	+/- 125

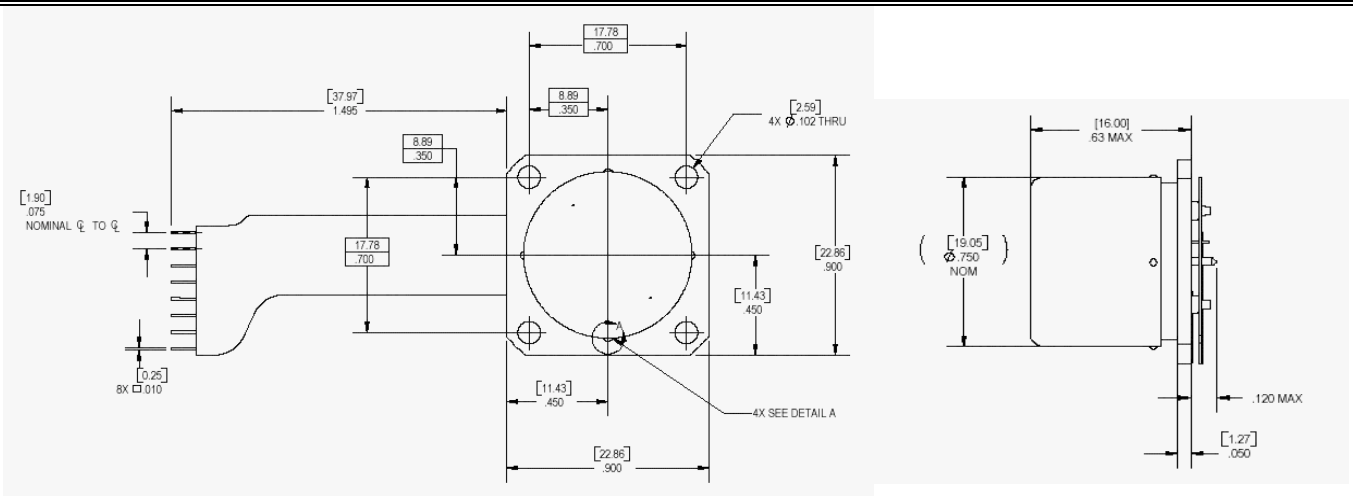
Typical Phase Noise Performance

Typical Phase Noise Results
(Oscillator at 6.7 GHz)



	1 kHz	10 kHz	100 kHz	1 MHz
-35℃	-72.16	-98.16	-122.30	-143.64
+25℃	-76.80	-102.80	-129.01	-143.76
+75℃	-76.94	-102.94	-129.35	-143.76

Outline Drawing



Specifications Subject to Change Without Notice