



LOW NOISE CRYSTAL OSCILLATORS > VHF CITRINE

FEATURES:

- Frequencies from 25 MHz to 160 MHz, fixed
- Ultra-Low or Golden Phase Noise
- Ruggedized for Dynamic Environments
- Low G-sensitivities to 2e-10/g per axis
- Good Temperature Stability
- Phase Lock Option Available
- Vibration Isolated Version Available

APPLICATIONS:

- Military Applications
- Airborne, Ground, Shipboard
- Radar Systems
- Tactical Radio
- Vehicular Communications
- Reference Source



Electrical Specifications

Output Frequency (fixed, specify within range)	25 MHz to 160 MHz	
Output Level	+13 dBm ±2 dB into 50 ohms	
Aging (100 MHz model, typical)	5 x 10 ⁻⁹ per day after 30 days operating, typical	
	5 x 10 ⁻⁷ second year, typical	
	3 x 10 ⁻⁷ per year thereafter, typical	
Temperature Stability (consult factory for other ranges)	(100 MHz model, typical)	
	Range E: 0 to + 50°C (Ref: +25°C)	≤ ±2 x 10 ⁻⁷
	Range F: -20 to + 70°C (Ref: +25°C)	≤ ±5 x 10 ⁻⁷
	Range G: -55 to + 85°C (Ref: +25°C)	≤ ±2 x 10 ⁻⁶
Phase Noise	(Frequency Dependent: See Standard Specifications and Part Numbers table below for details)	
Harmonics	≤ -30 dBC	
Spurious	≤ -80 dBC	
Tuning	(MT and ET ranges can be reversed upon request)	
-Mechanical Tuning	≥ ±4 x 10 ⁻⁶ , typical	
-Electronic Tuning Tuning A: 0 to ±10 VDC Tuning B: ±5 VDC Slope: Negative	≥ ±5 x 10 ⁻⁷ , typical	
	≥ ±5 x 10 ⁻⁷ , typical	
	(Positive Slope available on some ET only models)	
Supply Voltage	+15 VDC or +12 VDC (±5%)	
Warm-up Power	≤ 6 Watts for 5 minutes at +25°C	
Total Power	≤ 3 Watts at +25°C	
Crystal Type	SC-cut	
Acceleration Sensitivity	≤ 5 x 10 ⁻¹⁰ /g, typical to ≤ 2 x 10 ⁻¹⁰ /g, available	

Mechanical

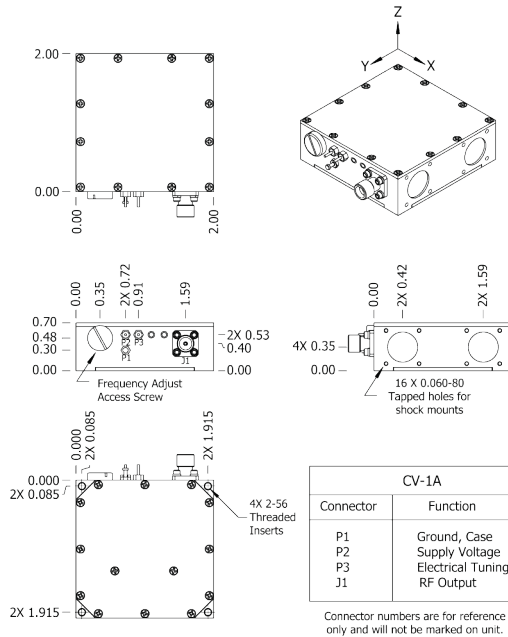
Packaging	Nickel-plated Machined Aluminum
Dimensions	2" X 2" X 0.7"
Connectors/Mounting	Package A SMA(F) and solder pins on side Threaded Inserts, #2-56, 4 places
	Package B SMA(F) x2 and solder pins on side Threaded Inserts, #2-56, 4 places

DESCRIPTION:

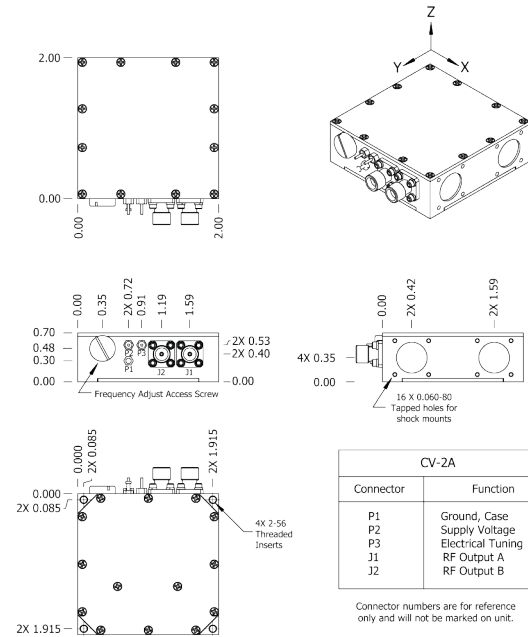
VHF Citrine is a 25 MHz to 160 MHz fixed frequency rugged OCXO featuring Ultra-Low or Golden phase noise options (to -190 dBc/Hz), good temperature stability and low g-sensitivity (to 2E-10/g per axis). Designed for demanding applications, the VHF Citrine provides excellent phase noise performance under vibration with both hard-mount and vibration isolated versions available. The hard-mount nickel-plated machined aluminum package is 2" x 2" x 0.7" with single and dual output options. A low noise internal voltage regulator is included, which provides excellent power supply line rejection. Please consult the factory to discuss custom specification modifications which may better suit your application.

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PACKAGE A



PACKAGE B



Electrical Specifications

Part Number	Output Frequency* (MHz)	Typical Phase Noise (dBc/Hz), Static*					Output Level (dBm, into 50 ohms)*	Temperature Stability (Ref: +25°C)*	Supply Voltage (VDC)*	Acceleration Sensitivity (/g per axis)*	Package/ Connectors	Package Size (Inches)
		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz						
501-24069	100 MHz	-100	-130	-158	-176	-176	+13 ±2	±2E-7, 0 to +50°C	+12	3E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-24825	100 MHz	-100	-130	-158	-176	-176	+13 ±2	±2E-7, 0 to +50°C	+15	3E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-24977	100 MHz	-100	-130	-150	-168	-170	+13 ±2	±5E-7, 0 to +50°C	+15	3E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-24978	100 MHz	-100	-130	-150	-168	-170	+13 ±2	±5E-7, 0 to +50°C	+12	3E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-25247	100, Dual	-100	-130	-158	-176	-176	+10 ±2	±5E-7, -40 to +70°C	+15	5E-10, typ	SMA(f)X2 & Pins on Side	2 x 2 x 0.7
501-25900	100 MHz	-108	-138	-136	-183	-188	+18 ±2	±2E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26198	80 MHz	-105	-135	-162	-183	-188	+18 ±2	±2E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26237	125 MHz	-100	-130	-160	-183	-188	+18 ±2	±2E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26249	50 MHz	-105	-135	-155	-169	-170	+13 ±2	±5E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26250	50 MHz	-105	-135	-158	-175	-176	+13 ±2	±2E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26527	80 MHz	-102	-132	-160	-176	-176	+13 ±2	±2E-7, 0 to +50°C	+15	3E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26862	80 MHz	-100	-130	-150	-168	-170	+13 ±2	±5E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26863	125 MHz	-95	-125	-150	-168	-170	+13 ±2	±5E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26864	160 MHz	-88	-118	-148	-168	-170	+13 ±2	±5E-7, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2 x 2 x 0.7
501-26866	100, Dual	-100	-130	-158	-176	-176	+10 ±2	±2E-7, -40 to +70°C	+15	3E-10, typ	SMA(f)X2 & Pins on Side	2 x 2 x 0.7

*Consult factory for custom frequency, phase noise performance, g-sensitivity, output level, temperature stability and supply voltage options.

** See website for additional Standard Part Numbers and Specifications