



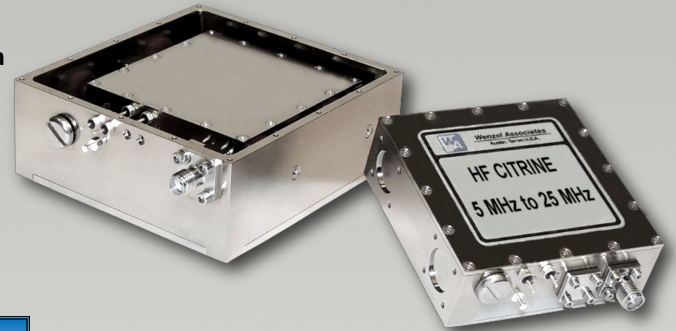
Low Noise Crystal Oscillators > HF Citrine

Features:

- Frequencies from 10 MHz to 25 MHz, fixed
- Standard or Premium Phase Noise
- Ruggedized for Dynamic Environments
- Low G-Sensitivity to 1E-10/g per axis
- Excellent Temperature Stability
- Low Aging Rate
- Vibration Isolated Version Available

Applications:

- Military Applications
- Airborne, Ground, Shipboard
- Radar Systems
- Tacticle Radio
- Vehicular Communication
- Reference Source



Electrical Specifications	
Output Frequency (fixed; specify within range)	10 MHz to 25 MHz
Output Level	+13 dBm ±2 dB into 50 ohms
Aging	(10 MHz model, typical)
Per day after 30 days operating, typical	5×10^{-10}
Second year, typical	5×10^{-8}
Per year thereafter, typical	3×10^{-8}
Temperature Stability (consult factory for other ranges)	(10 MHz model, typical)
Range E: 0 to +50°C (Ref: +25°C)	$\leq \pm 5 \times 10^{-9}$
Range F: -20 to +70°C (Ref: +25°C)	$\leq \pm 1 \times 10^{-8}$
Range G: -55 to +85°C (Ref: +25°C)	$\leq \pm 2 \times 10^{-7}$
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	$\geq \pm 1 \times 10^{-6}$, typical
- Electrical Tuning	$\geq \pm 2 \times 10^{-7}$, typical
Tuning A: 0 to +10 VDC	$\geq \pm 2 \times 10^{-7}$, typical
Tuning B: ±5 VDC	$\geq \pm 2 \times 10^{-7}$, typical
Slope: Negative	(Positive Slope available on some ET only models)
Supply Voltage	+15 VDC or +12 VDC (±5%)
Warm-up	≤ 6 Watts for 5 minutes at +25°C
Total	≤ 3 Watts at +25°C
Crystal Type	SC-cut
Acceleration Sensitivity	5×10^{-10} /g, typical; to 1×10^{-10} /g, available
Mechanical	
Packaging	Nickel-Plated Machined Aluminum
Dimensions	2.25" x 2.25" x 0.8"
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:

The HF Citrine is a 10 MHz to 25 MHz fixed frequency rugged OCXO featuring Standard or Premium phase noise options, excellent aging and temperature stability and low g-sensitivity (to 1E-10/g per axis). Designed for demanding applications, the HF Citrine provides excellent phase noise performance under vibration with both hard-mount and a vibration isolated version available. The hard-mount nickel-plated machined aluminum package is 2.25" x 2.25" x 0.8" 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 any custom specification modifications which may better suit your application.

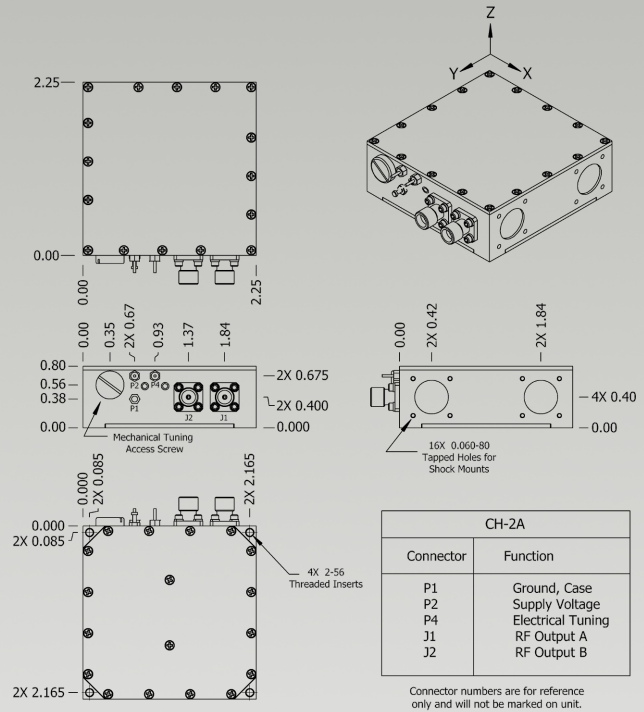
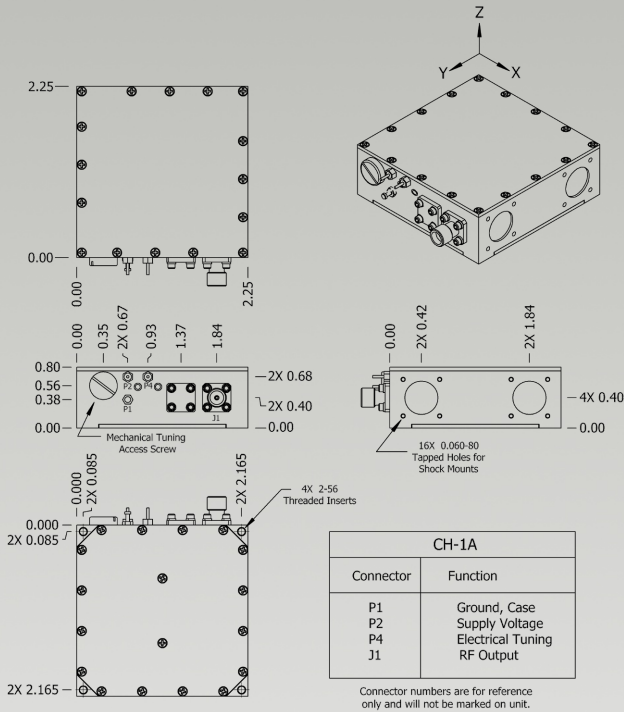




Low Noise Crystal Oscillators > HF Citrine

Package A

Package B



Standard Specifications and Part Numbers **

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						
501-23749	10	-135	-160	-172	-174	-174	+13 ±2	±2E-8, 0 to +50°C	+12	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-23750	10	-135	-160	-172	-174	-174	+13 ±2	±2E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24055	10	-130	-155	-165	-165	-165	+13 ±2	±5E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24056	10	-130	-155	-165	-165	-165	+13 ±2	±5E-8, 0 to +50°C	+12	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24215	10, dual	-130	-155	-165	-165	-165	+13 ±2	±5E-9, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24217	10, dual	-135	-160	-172	-174	-174	+13 ±2	±2E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24219	10, dual	-130	-155	-165	-165	-165	+13 ±2	±5E-9, 0 to +50°C	+12	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24221	10, dual	-135	-160	-172	-172	-172	+13 ±2	±2E-8, 0 to +50°C	+12	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24223	25	-115	-135	-150	-165	-165	+13 ±2	±5E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8
501-24224	25	-118	-145	-165	-172	-172	+13 ±2	±5E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 0.8

* Consult factory for custom frequency, phase noise performance, output level, temperature stability and acceleration sensitivity options.

** See website for additional Standard Part Numbers and Specifications.

