WENZEL ASSOCIATES

OCXO
VIBRATION ISOLATED HF CITRINE PLUS
"QUIETLY THE BEST"

LOW NOISE CRYSTAL OSCILLATORS > VIBRATION ISOLATED HF CITRINE PLUS

FEATURES:

- Frequencies from 1 MHz to 125 MHz, fixed
- Standard or Premium Phase Noise
- Ruggedized for Dynamic Environments
- Low G-Sensitivity to 1E-10/g per axis
- Natural Mount Frequency: ~35 Hz, typical
- Effective G-Sensitivity to 5E-12/g (2 kHz offset)

APPLICATIONS:

- Military Applications
- Airborne and Ground
- Radar Systems
- Tactical Radio
- Vehicular Communication

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)	$\leq \pm 1 \times 10^{-8}$
	Range F: -20 to +70°C (Ref: +25°C)	$\leq \pm 2 \times 10^{-8}$
	Range G: -55 to +85°C (Ref: +25°C)	$\leq \pm 5 \times 10^{-7}$
Phase Noise		*(Frequency Dependent: See Std 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	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
Crystal Acceleration Sensitivity		5×10^{-10}/g, typical; to 1×10^{-10}/g, available
Natural Mount Resonant Frequency		~50 Hz, typical
Mechanical		
Packaging		Nickel-Plated Machined Aluminum
Dimensions		3.25" x 3.05" x 1.25"
Connectors / Mounting		SMA(f) and solder pins on side Threaded Inserts, #2-56, 4 places

DESCRIPTION:

The Vibration Isolated HF Citrine Plus is a 10 MHz to 25 MHz fixed frequency rugged OCXO coupled with an additional circuit such as a multiplier, divider, amplifier or filter, when the application demands something extra, and mounted within an outer enclosure using shock mounts. This integrated assembly can provide a fixed output frequency between 1 MHz and 125 MHz and offers excellent aging and temperature stability, Standard or Premium phase noise and low g-sensitivity (to 1E-10/g per axis). Although vibration isolation may not be a viable solution for some applications, it works well for dampening vibration beyond the natural resonant frequency of the isolated unit and vibration profile. This unit is an ideal solution for airborne and mobile applications with random vibration requiring improved dynamic phase noise performance at offsets at and beyond 80 Hz. Effective g-sensitivity to 5E-12/g (2 kHz offset) can be realized. The nickel-plated machined aluminum outer enclosure is 3.25" x 3.05" x 1.75". An internal voltage regulator is provided for excellent power supply line rejection. Please consult the factory if you need any specifications to be modified to better suit your application.

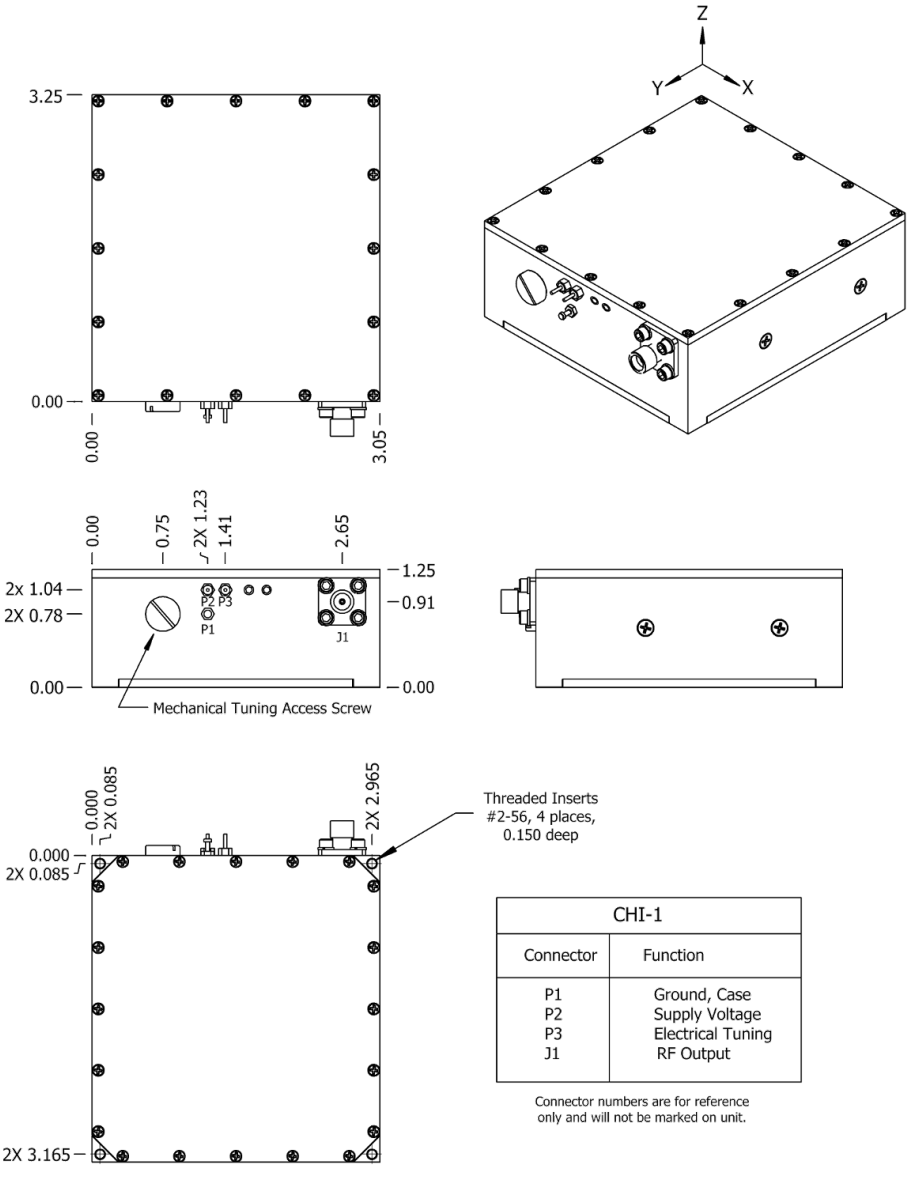
WENZEL ASSOCIATES
2215 Kramer Lane, Austin, Texas 78758-4002 • www.wenzel.com
Phone: 512-835-2038 • Fax: 512-719-4086 • sales@wenzel.com

WENZEL ASSOCIATES

OCXO
VIBRATION ISOLATED
HF CITRINE PLUS

"QUIETLY THE BEST"

LOW NOISE CRYSTAL OSCILLATORS > VIBRATION ISOLATED HF CITRINE PLUS



CHI-1

Connector	Function
P1	Ground, Case
P2	Supply Voltage
P3	Electrical Tuning
J1	RF Output

Connector numbers are for reference only and will not be marked on unit.

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						
501-24973	10	-130	-155	-165	-165	-165	+13 ±2	±5E-8, 0 to +50°C	+15	3E-10, typ	SMA(f) & Pins on Side	3.05 x 3.25 x 1.25
501-24974	10	-130	-155	-172	-174	-174	+13 ±2	±2E-8, 0 to +50°C	+15	3E-10, typ	SMA(f) & Pins on Side	3.05 x 3.25 x 1.25

* 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.

WENZEL ASSOCIATES
2215 Kramer Lane, Austin, Texas 78758-4002 • www.wenzel.com
Phone: 512-835-2038 • Fax: 512-719-4086 • sales@wenzel.com