



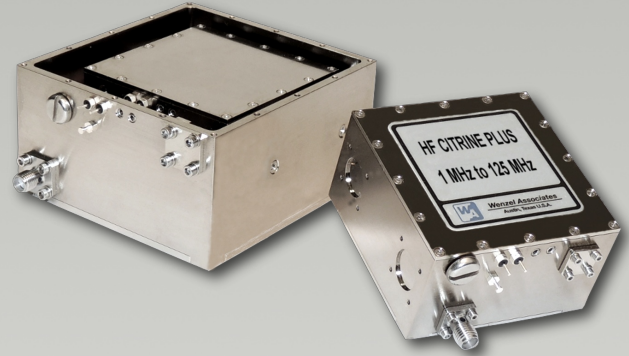
**Low Noise Crystal Oscillators > HF Citrine Plus**

**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
- 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	
<b>Output Frequency</b> (fixed; specify within range)	<b>1 MHz to 125 MHz</b>
<b>Output Level</b>	+13 dBm ±2 dB into 50 ohms
<b>Aging</b>	(50 MHz model, typical)
Per day after 30 days operating, typical	$5 \times 10^{-10}$
Second year, typical	$5 \times 10^{-8}$
Per year thereafter, typical	$3 \times 10^{-8}$
<b>Temperature Stability</b> (consult factory for other ranges)	(50 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)	$\leq \pm 2 \times 10^{-7}$
<b>Phase Noise</b>	(Frequency Dependent: See Standard Specifications and Part Numbers table below for details)
<b>Harmonics</b>	$\leq -30$ dBc
<b>Sub-Harmonics</b>	$\leq -50$ dBc
<b>Spurious</b>	$\leq -80$ dBc
<b>Tuning</b>	(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)
<b>Supply Voltage</b>	+15 VDC or +12 VDC (±5%)
<b>Warm-up</b>	$\leq 9$ Watts for 5 minutes at +25°C
<b>Total</b>	$\leq 6$ Watts at +25°C
<b>Crystal Type</b>	SC-cut
<b>Acceleration Sensitivity</b>	$5 \times 10^{-10}$ /g, typical; to $1 \times 10^{-10}$ /g, available
Mechanical	
<b>Packaging</b>	Nickel-Plated Machined Aluminum
<b>Dimensions</b>	2.25" x 2.25" x 1.3"
<b>Connectors / Mounting</b>	
- 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

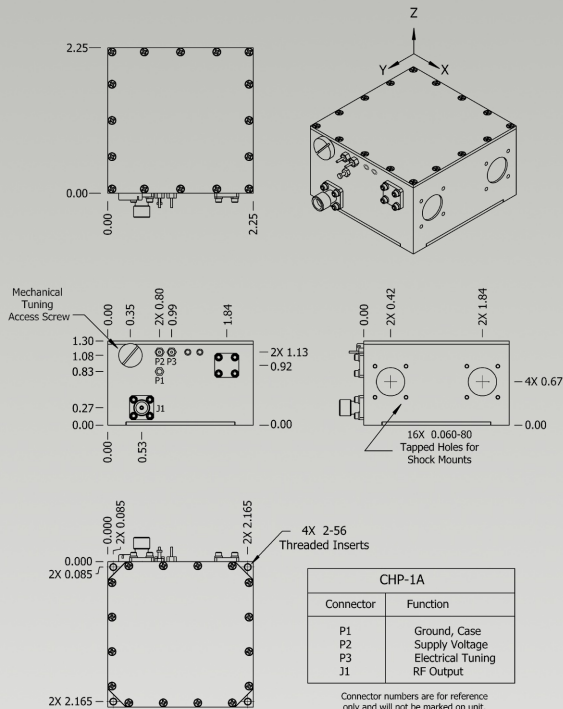
**Description:**

The HF Citrine 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. The integrated unit can provide output frequencies from 1 MHz to 125 MHz and offers excellent aging and temperature stability, Standard or Premium phase noise and low g-sensitivity (to 1E-10/g per axis). Designed for demanding applications, the HF Citrine Plus 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 1.3". 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.

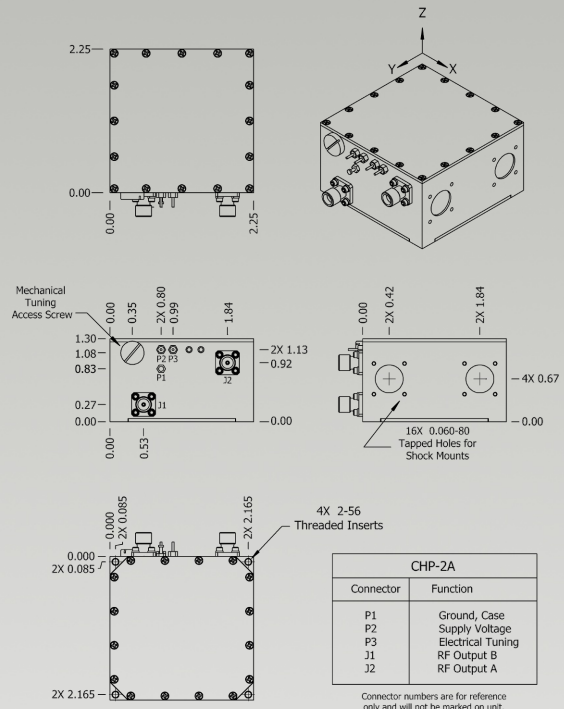


**Low Noise Crystal Oscillators > HF Citrine Plus**

**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						
501-25557	20	-123	-148	-158	-158	-158	+13 ±2	±5E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 1.3
501-25558	20	-128	-153	-165	-167	-168	+13 ±2	±5E-8, 0 to +50°C	+15	5E-10, typ	SMA(f) & Pins on Side	2.25 x 2.25 x 1.3
501-26077	25	-120	-145	-150	-150	-150	+13 ±2	±5E-8, 0 to +50°C	+15	N/A	SMA(f) & Pins on Side	2.25 x 2.25 x 1.3
501-26078	25	-130	-150	-158	-160	-160	+13 ±2	±5E-8, 0 to +50°C	+15	N/A	SMA(f) & Pins on Side	2.25 x 2.25 x 1.3

\* 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.



**Crystal Oscillators**

• **RF Modules**

• **Frequency Sources**

• **IMAs**

• **Military**

• **Space**

