

AS9100 / ISO9001 Certified

High Reliability

MTI-Milliren Technologies Inc. offers a new level of Oven Controlled Crystal Oscillator (OCXO) performance to defense and aerospace OEM's with the release of the extremely durable 225 Series OCXO. Designed to withstand the most demanding environments the 225 Series OCXO has been tested and survived multiple 100G shocks as well as random acceleration of 46g rms up to 2kHz. The 225 Series is radiation hardened to tactical levels for Gamma, Neutron, and Total Dose exposures. The 225 Series OCXO maintains a long heritage from MTI's proven commercial technology and is available in a frequency range of 4.8MHz to 100MHz with thermal stability performance of +/-1.0E-08 from -54°C to +85°C at 10MHz. This rugged precision OCXO is ideal for Space, Airborne, Shipboard, or Ground Mobile and Fixed GPS applications. See the detailed performance below.

Applications

- Space
- Airborne and Shipboard
- Ground Mobile and Fixed GPS Applications
- GPS Receivers

Electrical Performance (Typical)

Output Frequency: 10MHz

Thermal Stability: ±1.0E-08

Temperature Range: -54°C to +85°C

Frequency Tolerance: ±1.0E-07 @ +25°C

Daily Aging: 1.0E-09/day After 24 Hours Continuous Operation

Mechanical Tuning: ±1.5E-06

Warm Up: 1.0E-08 After 3 Minutes Referenced to 30 Minutes @ -40°C

Oven Supply Voltage and Power: 20VDC +/-5%; 7.5 W Warm-up, 1.8W Continuous at -40°C

Oscillator Supply Voltage and Power: 10 to 16VDC; 0.2W Max.

Output Power: +1dBm ±2dB

Short Term Stability: 5.0E-12 at 1 Second



Spurious:	-80dBc
Harmonics:	-25dBc
Phase Noise:	
Offset	Level
10Hz	-123dBc/Hz
100Hz	-137dBc/Hz
1000Hz	-139dBc/Hz
10000Hz	-143dBc/Hz

Environmental

Shock: MIL-STD-202 Method 213 Test Condition I (100g, 6 Microseconds, Sawtooth).

Vibration: MIL-STD-202, Method 204, Test Condition G, Sine, (0.06 Inch Double Amplitude From 10-100Hz, 30g from 100-2000Hz.) MIL-STD-202 Method 214, Random, 10 – 2000Hz up to 46g rms Any Axis.

Salt Spray: MIL-STD-202, Method 101, Test Condition B.

Hermetic Seal: MIL-STD-202 Method 112, Test Condition D

Altitude: MIL-STD-202 Test Condition C (to 80,000 ft)

Radiation Hardened: Gamma, X-Ray, Neutron, Prompt and Total Dose

Package: Dimensions 4.00"L x 1.375"W x 1.8"H, #4-40 Blind Mounting Insert

Weight: 7.3oz Max.

RF Output Connector: Gold Plated SMA Female

Case Material: Aluminum, Electroless Nickel Plated

*Parameters can be modified to meet specific requirements