

High Reliability OCXO

MTI-Milliren Technologies Inc. introduces a new level of Oven Controlled Crystal Oscillator (OCXO) performance to defense and aerospace OEM's with the release of the extremely durable model 229-0101. Designed to withstand the most demanding environments the model 229-0101 has been tested and survived multiple 100G shocks as well as random acceleration of 46g rms up to 2kHz. The 229-0101 is nuclear hardened to tactical levels for Gamma, Neutron, and Total Dose exposures. The model 229-0101 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 -54C to +85C at 10MHz. This rugged precision OCXO is ideal for Space, Airborne, Shipboard, or Ground Mobile and Fixed GPS applications. See the detailed performance below. For more information or to request a quote send an email to sales@mti-milliren.com.

Electrical Performance (Typical)

Output Frequency: 10.23MHz
Thermal Stability: +/-1.0E-08
Temperature Range: -54C to +85C
Frequency Tolerance: +/-1.0E-07 @ +25C
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 @-40C
Oven Supply Voltage: 20Vdc +/-5%. 7.5 W Warm-up, 1.8 W Continuous at -40C
Oscillator Supply Voltage: 10 to 16Vdc 0.2 W Max
Output power: +1dBm +/-2dB
Short Term Stability: 5.0E-12

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 (100 g, 6 microseconds, Sawtooth).
Vibration: MIL-STD-202, Method 204, Test Condition G, Sine, (0.06 inch double amplitude from 10-100 Hz, 30G from 100-2000 Hz). 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, XRay, Neutron, Prompt and Total Dose
Package: Dimensions 4.00"Lx1.375"Wx1.8"H, 4-40 Blind Mounting
Weight: 7.3 oz Max.
RF Output Connector: Gold Plated SMA Female
Case Material: Aluminum, Electroless Nickel Plated