



9250

Military Low Profile OCXO

STANDARD FEATURES

- 10MHz Output
- $<3E-10$ Per Day Aging
- $<3.0E-10$ g Sensitivity
- Low Phase Noise
- <0.9 Inches High

The Symmetricom 9250 is a military OCXO designed for ground tactical and airborne applications where superior frequency stability and phase noise are required. Advanced communications, navigation and targeting systems require precision oscillators that can withstand a wide range of operating environments with minimal degradation in frequency accuracy and stability. The 9250 is part of a new family of low g oscillators from Symmetricom that support these applications.

The 9250 is unique in that it combines excellent frequency stability and low dynamic phase noise in a small, low profile package. The 9250 achieves less than -100dBc phase noise at 1Hz from the 10MHz carrier.

The 9250 is based around an ovenized 10 MHz, 3rd-overtone SC-cut crystal resonator enclosed in a hermetically sealed 1.50" x 2.76" x 0.9" H package. All inputs and outputs are accessible via feed-through pins on the side of the chassis. The small, low profile package allows for easy integration into complex subsystems where space is at a premium.

Symmetricom's 9250 can be made available with other output frequencies with varying levels of stability. Please contact the factory for custom output requirements.



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9250 Specifications

ELECTRICAL SPECIFICATIONS

- Frequency standard output: 10MHz
- Format: Sinewave
- Amplitude: $7.0 \pm 2\text{dBm}$
- Harmonic: $< -30\text{dBc}$
- Non harmonic: $< -80\text{dBc}$
- Load impedance: 50Ω

PERFORMANCE PARAMETERS

- Stability: 10MHz
- Avg time(s)
 - 1 $< 1.0\text{E}-11$
 - 10 $< 1.0\text{E}-11$
- Aging
 - Per day: $< 3.0\text{E}-10$
 - Per year: $< 4.0\text{E}-8$
 - 10 years: $< 1.0\text{E}-6$
- Retrace: $\pm 1\text{E}-8$
- Vibration sensitivity
 - Per g, total gamma: $\leq 3.0\text{E}-10$
- SSB Phase noise (Static)
 - Offset (Hz) 10MHz
 - 1 -100dBc
 - 10 -125dBc
 - 100 -140dBc
 - 1,000 -150dBc
 - 10,000 -155dBc
 - 100k -155dBc
- Temp. vs Freq.: -40 to $65\text{C} < \pm 4\text{E}-8$
- Tuning range
 - Analog $\pm 5\text{E}-7$ over 0 to 6 VDC
 - I²C digital tuning option

ENVIRONMENTAL & PHYSICAL SPECIFICATIONS

- General Environment
 - Temperature (operating): -40°C to 65°C
 - Temperature (storage): -40°C to 70°C
 - Humidity: 95% up to 50°C
 - Altitude (operating): 0 to 50,000 feet
- Random vibration
 - Operating (endurance): 30grms
- DC Power requirements: 15VDC
 - $< 3\text{W}$ operating power at 15Vdc
 - 4 to 12W warm-up power at 15Vdc
- Dimensions: 1.50 x 2.76 x 0.9 H



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