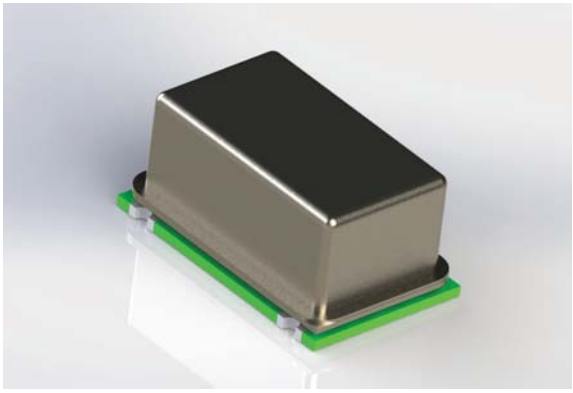
MTI
MTI-MILLIREN TECHNOLOGIES, INC.

212 SERIES OCXO

AS9100 / ISO9001 Certified

Surface Mount

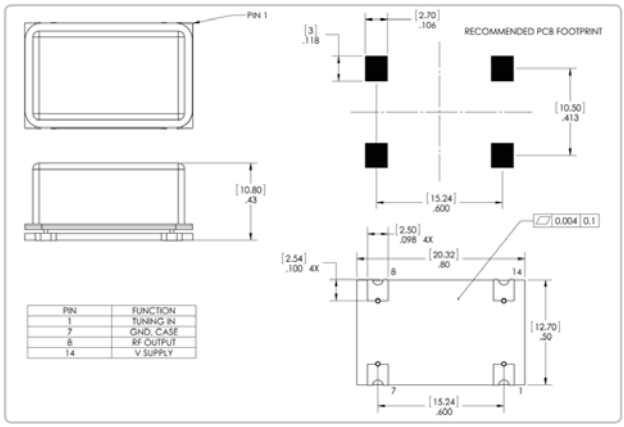
The 212 Series is one of the highest performance and most ultra compact surface mount Oven Controlled Crystal Oscillators (OCXO) in the industry. The 212 Series performs to STRATUM III and IIIe standards and is ideal for applications requiring fast warm-up and low power consumption. The low part count combined with a hermetically sealed package makes this part one of the most reliable in its class. The 212 Series has been specifically designed for your high volume applications.



Key Features

- Compact size, approximately 4.6 grams
- Surface Mount
- Low power consumption
- Fast warm-up, 3 minutes to 1.0E-07
- Low part count
- Hermetically sealed package
- Thermal stability to 2.0E-08 over -40°C to +85°C
- Wide Frequency Range
- Low phase noise, -120dBc/Hz at 10Hz

Interface Control Drawing



Applications

- Base Stations
- Instrumentation
- Test Equipment
- Telecommunications
- Battery powered applications

Typical Performance

Parameter	10 MHz	100 MHz	200 MHz
Temperature Range	-30 to +70°C	-40 to +85°C	-30 to +70°C
Thermal Stability	2.0E-08	5.0E-08	5.0E-08
Phase Noise (at 1Hz)	-90dBc/Hz	-70dBc/Hz	-60dBc/Hz
Phase Noise (at 100kHz)	-155dBc/Hz	-172dBc/Hz	-172dBc/Hz
Short Term Stability (1s)	2.0E-11	1.0E-10	2.0E-10
Short Term Stability (10s)	5.0E-11	5.0E-10	1.0E-09
Aging (per year)	5.0E-08	3.0E-07	4.0E-07
Warm-up Power	1.8W	2.8W	2.2W
Continuous Power (25°C)	0.6W	1.0W	0.8W

*RoHS compliant available

Performance Range

Parameter	Available Range
Frequency	5MHz to 200MHz
Thermal Stability	2.0E-08 to 5.0E-07
Operating Temperature	-55 to +95°C
Aging (per year)	5.0E-08 to 4.0E-07
Supply Voltage	3.3V to 15V
Supply Voltage Sensitivity	5.0E-09
Output	Sine(0 to +13dBm)
Harmonics	Down to -40dBc
Warm-up Time (25°C)	1 minute
Warm-up Power	1.5W to 4.5W
Continuous Power (25°C)	0.5W to 0.8W
Tuning Range	±2.0E-06 to ±5.0E-06
Tuning Voltage	Within 0 to +10V

*Parameters can be modified to meet specific requirements

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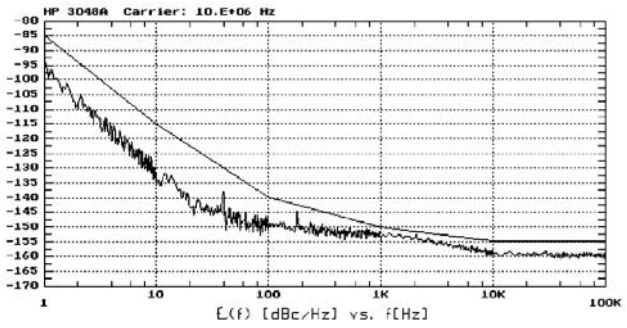
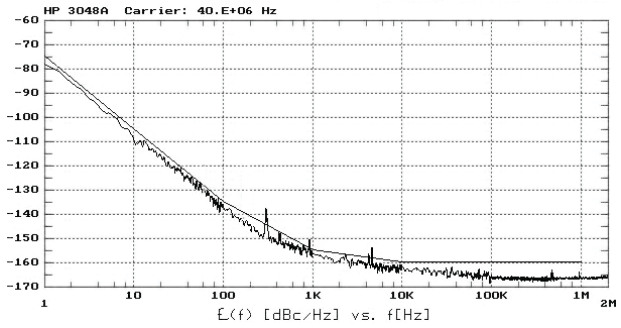
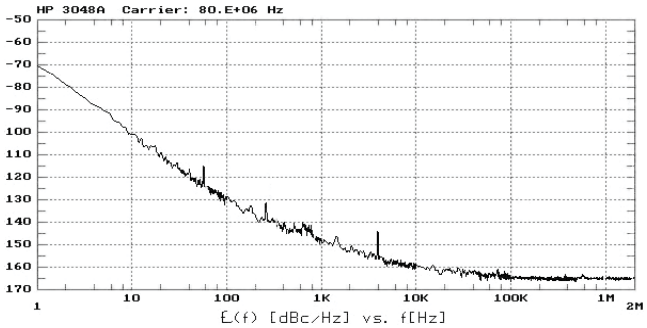
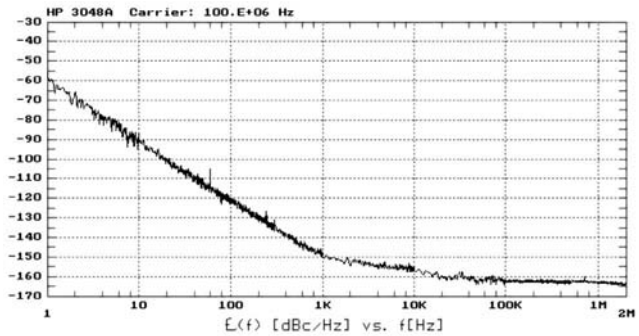
Phase Noise

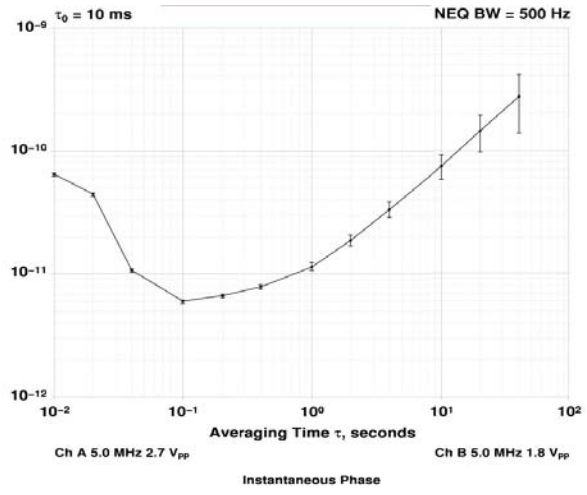




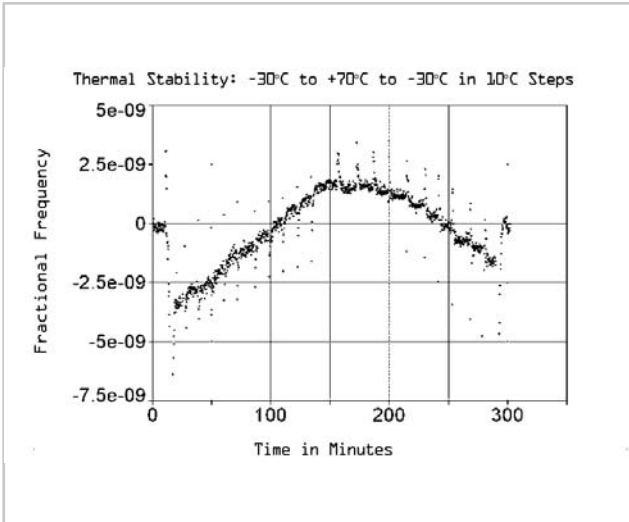




Allan Deviation $\sigma_y(\tau)$



Thermal Stability



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