

# 260 Series OCXO - Ultra Stable Atomic Standard Replacement

## Description

The 260 Series is an ultra high stability/high reliability oven controlled crystal oscillator (OCXO). The 260 Series offers thermal stabilities from 2.0E-010 to 4.0E-009 over a 100°C temperature range, rivaling Rubidium atomic clock performance without the wearout phenomena associated with Rubidium standards. The 260 Series has been used in many applications worldwide as a direct replacement for atomic clocks, providing a substantial cost savings both in the short and long term.

## Features

- STRATUM II, IIIe+ Performance
- PCB Mount, Industry Standard Footprint

## Applications

- STRATUM II, IIIe+ Telephony
- Atomic Standard Replacement
- GPS Receivers
- Timing and Frequency Standards
- TDMA PCS Base Stations
- Quasi Synchronous Radio



Performance Range	
Parameters	Available Range
Frequency	32 KHz to 30 MHz
Thermal Stability	2.00E-10 to 4.00E-09
Operating Temperature	-40°C to +85°C
Output	HCMOS/ACMOS 0 to +13dBm Sine
Supply Voltage	+11 to +28V (DC)
Tuning Voltage	-10 to +10V (DC)

## Design Note:

Base Models can be customized to your specifications using the performance range for this series.

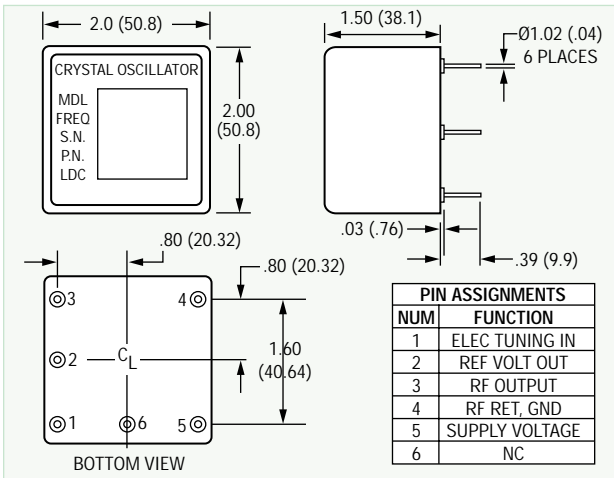
## 260 Series Base Model Performance Guide

Frequency MHz	Crystal Cut	Thermal Stability*	Aging Rate per Day	Aging Rate per Year	Output	Phase Noise @ offsets (dBc/Hz)					
						1Hz	10Hz	100Hz	1kHz	10kHz	100kHz
5.000	AT	2.00E-09	5.00E-10	1.00E-07	9dBm Sine	-85	-115	-140	-150	-150	-160
5.000	SC	2.00E-10	5.00E-11	3.00E-08	9dBm Sine	-110	-140	-150	-157	-160	-160
5.000	SC	1.00E-09	1.00E-10	3.00E-08	9dBm Sine	-100	-130	-145	-155	-160	-160
8.192	SC	2.00E-10	3.00E-10	6.00E-08	HCMOS	-95	-125	-145	-155	-160	-160
10.000	AT	2.00E-09	3.00E-09	5.00E-07	9dBm Sine	-70	-100	-125	-140	-150	-150
10.000	SC	2.00E-10	3.00E-10	6.00E-08	HCMOS	-95	-125	-145	-155	-160	-160
10.000	SC	2.00E-10	5.00E-11	3.00E-08	9dBm Sine	-90	-120	-140	-150	-155	-155
10.240	SC	2.00E-10	5.00E-11	3.00E-08	9dBm Sine	-90	-120	-140	-150	-155	-155
13.000	SC	2.00E-10	5.00E-11	3.00E-08	9dBm Sine	-90	-120	-130	-140	-145	-145
15.000	SC	2.00E-10	5.00E-11	3.00E-08	9dBm Sine	-90	-120	-130	-140	-150	-150
16.384	SC	2.00E-10	5.00E-11	3.00E-08	HCMOS	-90	-120	-130	-140	-150	-150

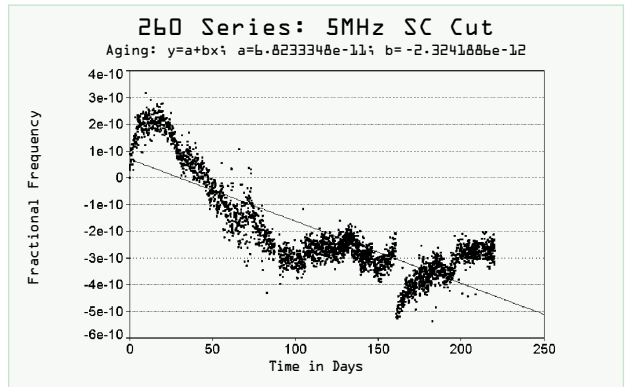
\* Temperature Range is from -30°C to +70°C



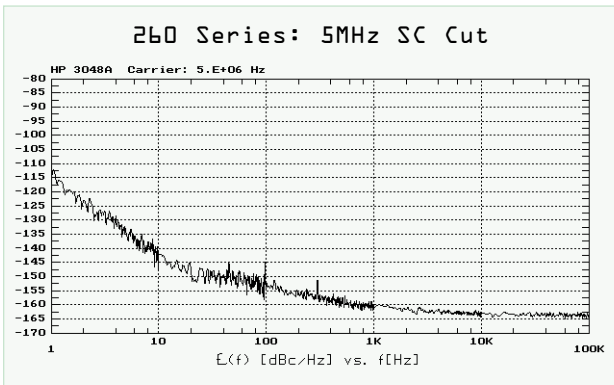
## 260 Interface Control Drawing



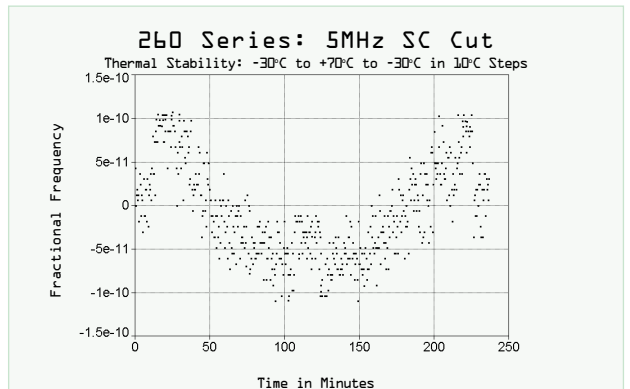
## Aging



## Phase Noise



## Thermal Stability



Short Term Stability	dF/dV	dF/dL	Warm Up Time (Min)	Warm Up dF/F	Warm Up Power (W)	Continuous Power (W) @25°C	Tuning (Min)	MTI Model #
2.00E-11	1.00E-09	1.00E-09	15	2.00E-08	12.0	2.7	±1.50E-06	260-0503
1.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.7	±5.00E-07	260-0504
2.00E-12	1.00E-10	1.00E-10	15	2.00E-08	12.0	2.7	±3.00E-07	260-0511
7.00E-12	2.00E-10	5.00E-10	15	2.00E-08	12.0	2.7	±7.00E-07	260-0614
5.00E-11	5.00E-10	2.00E-09	15	2.00E-08	12.0	2.7	±2.00E-06	260-0501
7.00E-12	2.00E-10	5.00E-10	15	2.00E-08	12.0	2.7	±7.00E-07	260-0620
2.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.9	±5.00E-07	260-0618
2.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.9	±5.00E-07	260-0616
2.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.9	±5.00E-07	260-0560
2.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.9	±5.00E-07	260-0617
2.00E-12	2.00E-11	5.00E-11	15	2.00E-08	12.0	2.9	±5.00E-07	260-0619