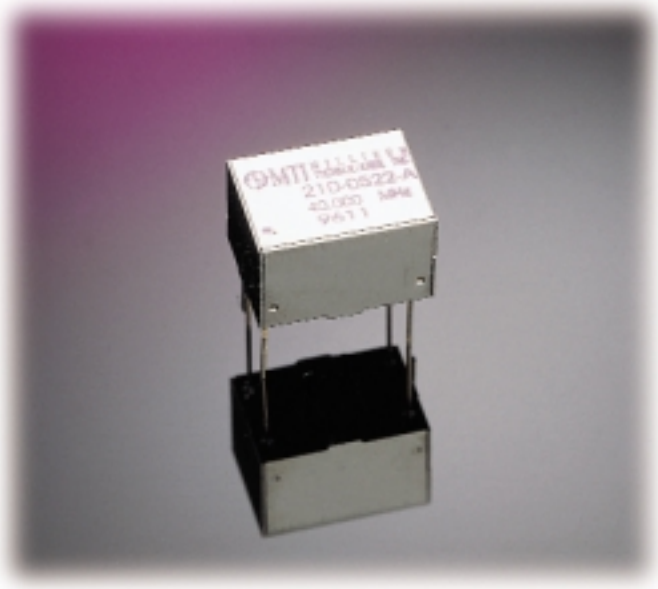
210 Series OCXO - Mini OCXO in a 14 Pin DIP Package

Description

The 210 Series is an ideal replacement for any 14-pin DIP clock oscillator or TCXO where superior performance is required. The 210 Series offers ovenized performance with a thermal stability of 5.0E-07 over 100°C temperature range and 0.70W continuous power consumption @ 25°C. The low power consumption makes the 210 Series ideal for instrumentation, point-to-point wireless, and battery powered applications.



Features

- STRATUM III Performance
- Low Phase Noise
- Low Power Consumption
- 14-Pin DIP Package

Applications

- STRATUM III, IIIe Telephony
- Microwave Radios
- V-SAT Terminals
- GPS Receivers
- SONET Clocks
- Instrumentation

Performance Range	
Parameters	**Available Range**
Frequency	32 KHz to 120 MHz
Thermal Stability	1.00E-07 to 1.00E-06
Operating Temperature	-40°C to +85°C
Output	HCMOS/ACMOS 0 to +9dBm Sine
Supply Voltage	+5 to +15V (DC)
Tuning Voltage	+0.50 to +10V (DC)

Design Note:

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

210 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
9.600	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-60	-90	-120	-150	-155	-155
10.000	AT	5.00E-07	5.00E-09	5.00E-07	HCMOS	-70	-100	-125	-140	-145	-150
10.000	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-60	-90	-120	-150	-155	-155
12.800	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-60	-90	-115	-140	-150	-150
13.000	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-60	-90	-115	-140	-150	-150
16.384	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-150
38.880	AT	5.00E-07	5.00E-09	5.00E-07	HCMOS	-55	-85	-115	-140	-150	-150
50.000	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-50	-80	-110	-140	-150	-150
65.536	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-45	-75	-105	-135	-145	-150
77.760	AT	5.00E-07	5.00E-09	5.00E-07	7dBm Sine	-40	-70	-100	-130	-140	-150
80.000	AT	5.00E-07	5.00E-09	5.00E-07	3dBm Sine	-40	-70	-100	-130	-140	-150
100.000	AT	5.00E-07	5.00E-09	5.00E-07	5dBm Sine	-40	-70	-100	-130	-140	-150

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

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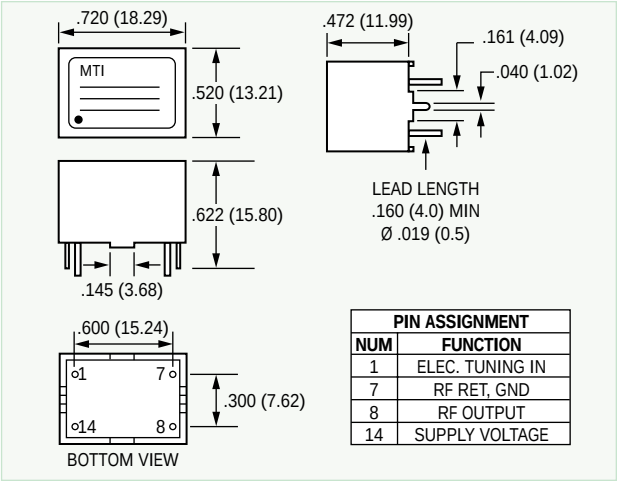
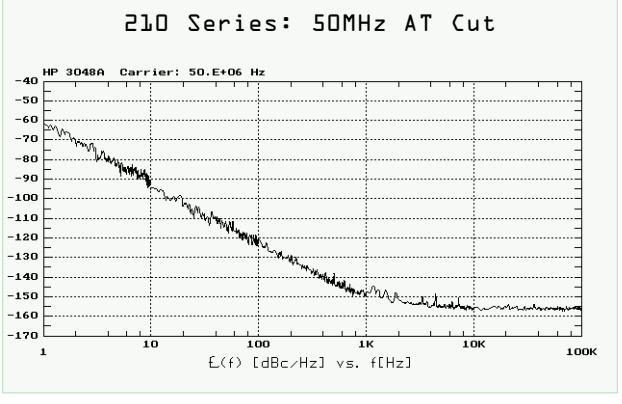
210 Interface Control Drawing

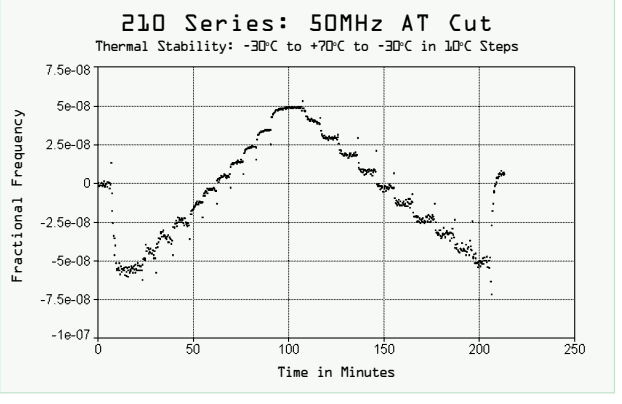


PIN ASSIGNMENT	
NUM	FUNCTION
1	ELEC. TUNING IN
7	RF RET, GND
8	RF OUTPUT
14	SUPPLY VOLTAGE

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 #
1.00E-10	5.00E-08	2.00E-08	15	1.00E-07	2.5	0.7	±5.00E-06	210-0595
1.00E-10	5.00E-08	2.00E-08	15	1.00E-07	2.5	0.7	±5.00E-06	210-0663
1.00E-10	5.00E-08	2.00E-08	15	1.00E-07	2.5	0.7	±5.00E-06	210-0501
5.00E-10	2.00E-07	1.00E-07	15	1.00E-07	2.5	0.7	±5.00E-06	210-0507
5.00E-10	2.00E-07	1.00E-07	15	1.00E-07	2.5	0.7	±8.00E-06	210-0506
1.00E-09	2.00E-07	2.00E-07	15	1.00E-07	2.5	0.7	±5.00E-06	210-0508
1.00E-09	1.00E-07	5.00E-08	15	1.00E-07	2.5	0.7	±8.00E-06	210-0664
1.00E-09	1.00E-07	5.00E-08	15	1.00E-07	2.5	0.7	±5.00E-06	210-0520
1.00E-09	1.00E-07	5.00E-08	15	1.00E-07	2.5	0.7	±5.00E-06	210-0661
1.00E-08	5.00E-07	1.00E-07	15	1.00E-07	2.5	0.7	±5.00E-06	210-0662
1.00E-08	5.00E-07	1.00E-07	15	1.00E-07	2.5	0.7	±5.00E-06	210-0577
1.00E-08	5.00E-07	1.00E-07	15	1.00E-07	2.5	0.7	±5.00E-06	210-0599