

205 Series OCXO - Hermetically Sealed Mini OCXO

Description

The 205 Series is the most compact OCXO in the industry. The hermetically sealed package measures only 0.815"L x 0.515"W x 0.394"H (20.7 x 13.1 x 10.0mm). The 205 Series offers a thermal stability of $\pm 3.5E-06$ over 100°C temperature range, warms up in less than 5 minutes, and consumes less than 0.45W at +25°C, making it exceptional for battery powered applications. Phase noise is -50dBc/Hz at 1 Hz offset with a noise floor of -160dBc/Hz. Frequency range is 8 MHz to 200MHz.



Features

- Low Phase Noise
- Low Power Consumption
- Compact Package
- Hermetically Sealed

Applications

- Mobile Radios
- PCS Systems
- Home Meter Reading
- Stratum III.5
- Battery Powered Applications

Performance Range

Parameters	Available Range
Frequency	8 MHz to 200 MHz
Thermal Stability	$\pm 1.00E-06$ to $\pm 7.00E-06$
Operating Temperature	-40°C to +85°C
Output	+7dBm Sine
Supply Voltage	+12 Volt
Tuning Voltage	0 to +10V (DC)

Design Note:

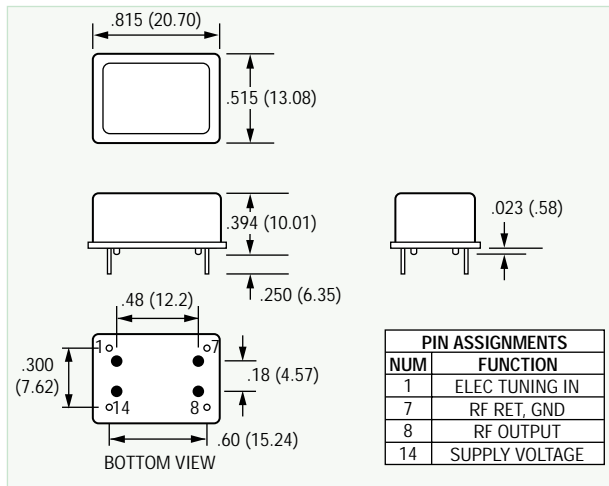
Base Models can be customized to your specifications using the performance range for this series.

205 Series Base Model Performance Guide

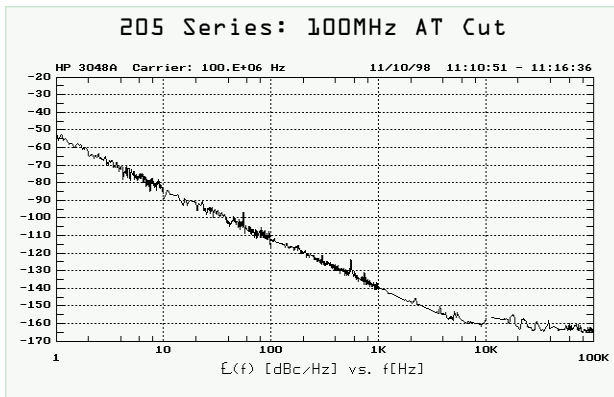
Frequency MHz	Crystal Cut	Thermal Stability*	Aging Rate per Day	Aging Rate per Year	Output	Phase Noise @ offsets (dBc/Hz)					
						1Hz	10Hz	100Hz	1kHz	10kHz	100kHz
8.192	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
9.600	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
10.000	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
10.240	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
12.800	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
13.000	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
16.384	AT	$\pm 3.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-55	-85	-115	-140	-150	-155
30.000	AT	$\pm 3.50E-06$	5.00E-09	5.00E-07	7dBm Sine	-50	-80	-110	-140	-150	-160
40.000	AT	$\pm 3.50E-06$	5.00E-09	5.00E-07	7dBm Sine	-50	-80	-110	-140	-150	-160
50.000	AT	$\pm 3.50E-06$	5.00E-09	5.00E-07	7dBm Sine	-50	-80	-110	-140	-150	-160
65.536	AT	$\pm 3.50E-06$	5.00E-09	5.00E-07	7dBm Sine	-50	-80	-110	-140	-150	-160
77.760	AT	$\pm 5.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-45	-75	-105	-130	-140	-150
80.000	AT	$\pm 5.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-45	-75	-105	-130	-140	-150
100.000	AT	$\pm 5.00E-06$	5.00E-09	5.00E-07	7dBm Sine	-45	-75	-105	-130	-140	-150

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

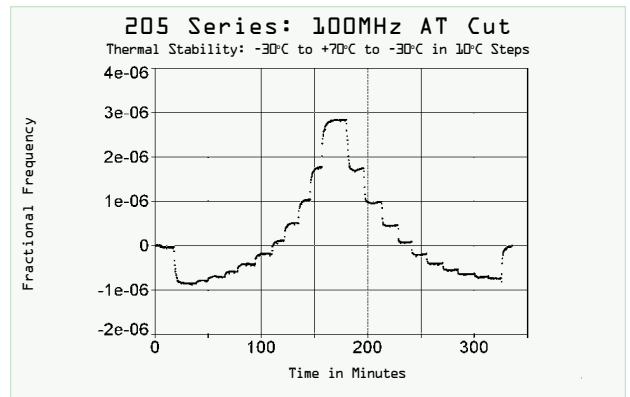
205 Interface Control Drawing



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 #
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0102
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0113
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0101
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0114
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0103
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0111
5.00E-10	4.00E-07	4.00E-07	5	2.00E-07	2.5	0.45	±1.20E-05	205-0104
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0105
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0108
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0109
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0106
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0112
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0107
5.00E-10	5.00E-07	5.00E-07	5	2.00E-07	2.5	0.45	±5.00E-06	205-0110