

AS9100 / ISO9001 Certified

High Frequency

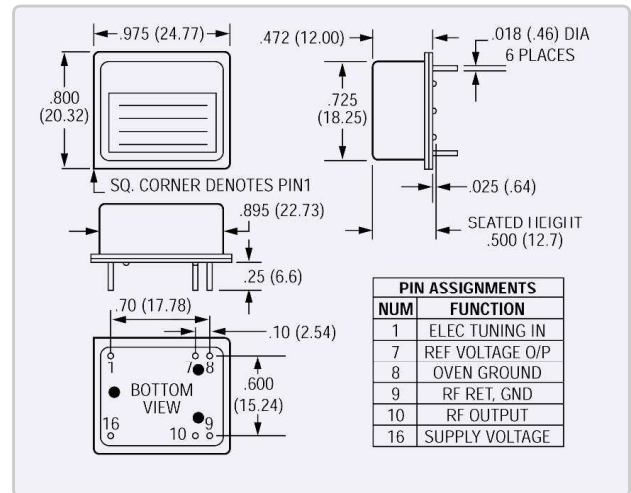
The 220 Series Oven Controlled Crystal Oscillator (OCXO) is an ideal solution for a variety of applications. The standard 220 model is a great fit for most of your commercial applications. The 220 is also available in both rugged as well as low-g versions that are perfect for your military applications. In addition, MTI has an extensive heritage with the 220 series OCXO utilizing swept quartz for space flight applications. The 220 Series is now available up to 500 MHz.



Key Features

- Wide frequency range (up to 500MHz)
- Fast Warm-up
- Low Phase Noise
- Hermetically Sealed Package
- AT and SC Crystal Cuts Available
- Surface Mount Package Available
- Available in Space Flight Version
- Meets Stratum III, IIIe Requirements

Interface Control Drawing



Applications

- Base Stations
- Instrumentation
- GPS Receivers
- Stratum IIIe Performance
- Rack Mounted App
- Test Equipment
- V-SAT Terminals

Typical Performance

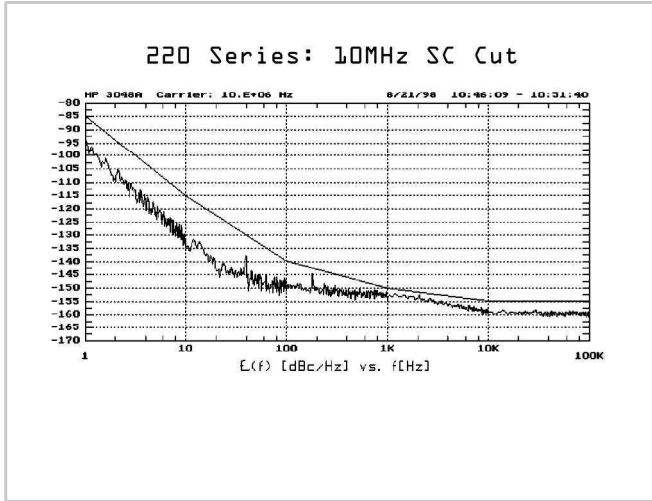
Parameter	10 MHz	100MHz	500MHz
Thermal Stability	2.0E-08	5.00E-07	5.0E-07
Phase Noise @ 1Hz	-85dBc/Hz	-50dBc/Hz	-45dBc/Hz
Phase Noise @ 100kHz	-155dBc/Hz	-150dBc/Hz	-150dBc/Hz
Short Term Stability (1s)	1.0E-11	1.0E-08	1.0E-08
Short Term Stability (10s)	5.0E-11	5.0E-08	5.0E-08
Output Level	+9dBm	+9dBm	+11.5dBm

Performance Range

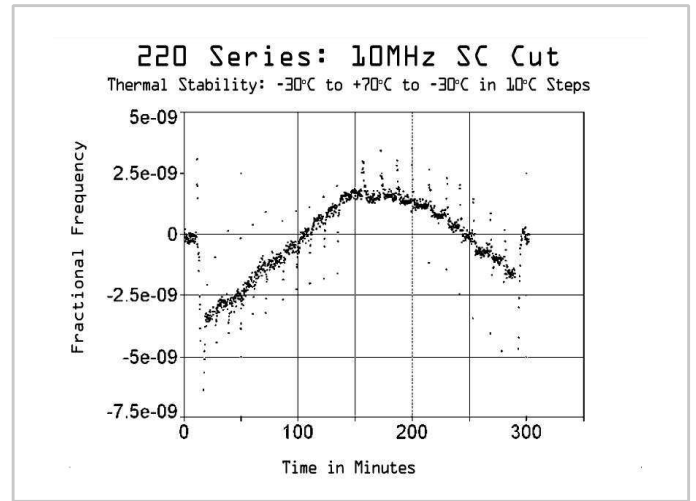
Parameter	Available Range
Frequency	5MHz to 500MHz
Thermal Stability	2.0E-08 to 5.0E-08
Operating Temperature	-40°C to +85°C
Aging (per year)	1.0E-07 to 1.0E-06
Supply Voltage	3.3V to 15.0V(DC)
Supply Voltage Sensitivity	5.0E-09 to 1.0E-07
Output	Sine, HCMOS
Harmonics	-20dBc
Spurious	-80dBc
Warm-up Time	5.0E-09 in 3 minutes
Warm-up Power	3.0W to 5.3W
Continuous Power	0.8W to 2.4W
Tuning Range	1.2E-06 to 5.0E-06
Tuning Voltage	0.0V to 10.0V

*Parameters can be modified to meet specific application requirements

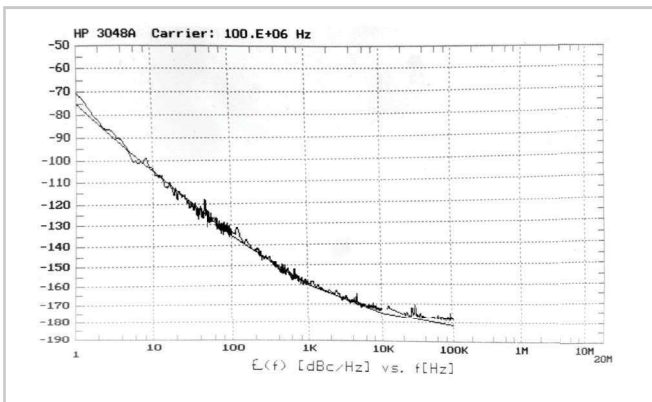
Phase Noise



Thermal Stability



100MHz Ultra Low Phase Noise



428MHz High Frequency / Low Phase Noise

