

Microprocessor Compensated, Tight Stability

- **OCXO performance in a TCXO**
- **Rugged construction for severe environments**
- **Tight stability, from $\pm 7 \times 10^{-8}$**
- **Squarewave (CMOS) or Clipped Sinewave outputs**
- **Through hole or SMD package option**



DESCRIPTION

T1220 series Microprocessor-Compensated Crystal Oscillators (MCXOs) provide OCXO performance in a TCXO. The part is packaged in either a standard through-hole 14 pin DIL equivalent package or a SMD version. Ability to operate in severe environments makes this an ideal high-performance TCXO. Designed and manufactured by Greenray Industries Inc.

GENERAL SPECIFICATION

Frequency Range:	10.0MHz to 50.0MHz
Output	Model T1220: CMOS Squarewave Model T1221: Clipped Sinewave
Load	Model T1220: 15pF Model T1221: 10pF//10kΩ
Symmetry:	50%±10% (Model T1220)
Frequency Stability	
vs. Supply:	$\pm 1 \times 10^{-7}$
vs. Ageing	$\pm 3 \times 10^{-7}$ per year after 30 days (typ.)
Supply Voltage:	+5.0 Volts or +3.3 Volts
Input Current:	30mA max.

STABILITY OVER TEMPERATURE

Temp. Range	Stability	Option Code
-20~+70°C	$\pm 7 \times 10^{-8}$	N78
-40~+85°C	$\pm 1 \times 10^{-7}$	T17

PHASE NOISE

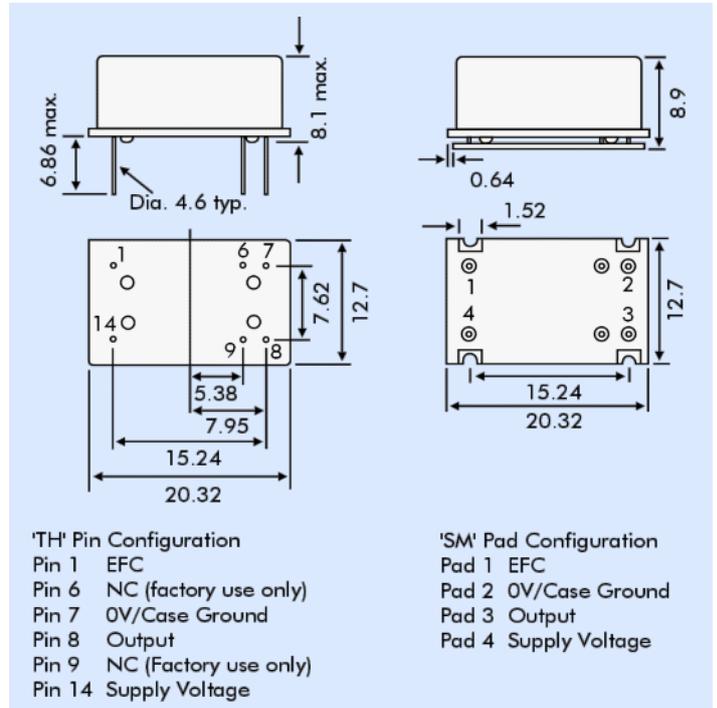
(CMOS 10.0MHz TYPICAL)

Offset	dBc/Hz
10Hz	-95
100Hz	-120
1kHz	-140
10kHz	-150
100kHz	-155

ENVIRONMENTAL

Storage Temperature:	-55 to +105°C
Random Vibration:	per MIL-STD-202, Meth. 214, Cond. I-J
Sine Vibration:	per MIL-STD-202, Meth. 204, Cond. D
Shock:	per MIL-STD-202, Meth. 213, Cond. F

T1220 - OUTLINES AND DIMENSIONS



PART NUMBERING PROCEDURE

Example:

T1220-T17-3.3-SM-10.0MHz

(Model number - Stability - Supply Voltage - Package - Frequency)