2525 Shader Road Orlando Florida 32804 USA
Phone: 407-298-2000 Fax: 407-293-2979
Website: www.mtronpti.com AMEX: LGL

MtronPTI XO7080 Pure Sine Output SMT VCXO
P/N: XO7080-xxx

Features:

Pure Sine-Output VCXO
Low Height: 0.155' max
Low-g: < 0.3ppb/g worst case axis option available
Compatible with automated assembly processes; including post reflow aqueous and non-aqueous cleaning

Applications:

Avionics
SatCom
Cyber security and communication systems

Electrical Specifications for Representative 125MHz VCXO:

Unless otherwise specified; T= +25°C, V_S = +5V_{DC}, V_C = +2.5V_{DC}, Load= 50Ω

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_O	10		300	MHz	
Frequency Stabilities						
vs. Temperature Range		-20		+20	ppm	-40°C to +85°C
vs. Supply Voltage		-0.5		+0.5	ppm	±5% change in voltage
vs. Load		-0.5		+0.5	ppm	±5% change in load
Aging 1st Year		-1.0		+1.0	ppm	
RF Output						
Output Type			Sinewave			
Output Load			50		Ω	±10%
Level		-3	0	+3	dBm	In a 50Ω load
Frequency Adjustment						
Method			External Voltage Tuned			
Tuning Slope			Negative			
Tuning Voltage	V_{TUNE}	0		+5	V_{DC}	
Tuning Range		-25		+25	ppm	
Modulation Bandwidth		3			kHz	
Input Impedance		10			KΩ	
Other Parameters						
SSB Phase Noise Under Static Conditions			-70			@ 10Hz Offset
			-97			@ 100Hz Offset
			-127			@ 1kHz Offset
			-150			@ 10kHz Offset
			-150			@ 100kHz Offset
G-Sensitivity				0.5	ppb/g	Worst case axis
Warm-up Time	ΔF/F			5	Minutes	To be within ±100ppb, @ 25˚C, referenced to the frequency after 24-hour power on
Harmonics				-20	dBc	
Spurious				-90	dBc	
Supply Voltage & Power Consumption						
Supply Voltage	V_S	4.75	5.0	5.25	V_{DC}	
Current Draw				3	mA	

Environmental Conditions:

Operating Temperature	OT	-40		+85	°C	
Non-Operating Temperature		-55		+105	°C	

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Shock and Vibration:

Three (3) ½ sine shock pulses of the given force and duration on each of the three (3) axis. The VCXO shall operate during and after the shock pulses.

Direction: Force	Duration (*msec*)
Vertical: 160 G's	3 to 5
Front to Back: 80 G's	3 to 5
Side to Side: 80 G's	3 to 5

VCXO shall operate for periods up to 2-hours duration when subjected to any of the vibration in the given ranges, with the corresponding input amplitude listed. The requirement shall be met regardless of the direction of the vibration.

Frequency (Hz)	Input Amplitude (inches)
4 – 15	0.04 ±0.008
16 - 25	0.03 ±0.006
26 - 33	0.04 ±0.008

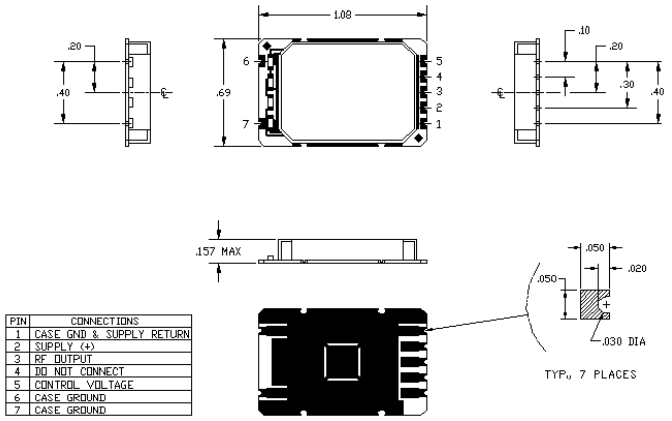

Figure 1 - XO7080 Outline Drawing

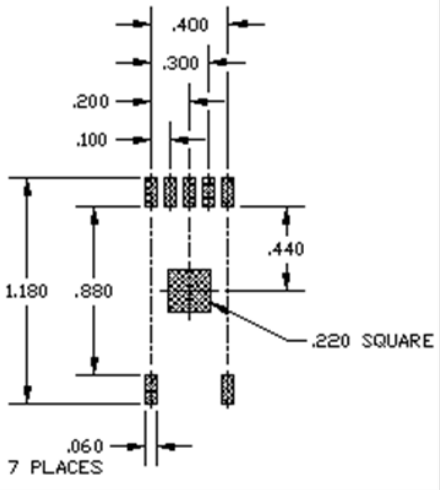

Figure 2 – Recommended PAD Layout

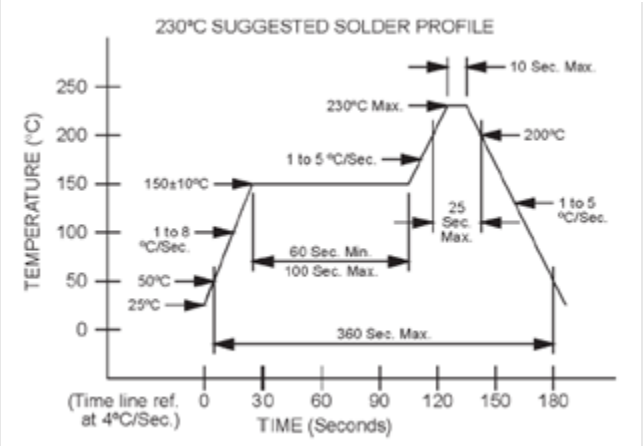

Figure 3 – Recommended Reflow Profile

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
12-28-15	A	DD	Preliminary Draft