



SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR
MtronPTI P/N: M2002T163

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		49.664000		MHz	
Frequency Stability	ΔF/F	-25		+25	ppm	
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Operating Voltage	V _{DD}	3.0	3.3	3.6	V	
Operating Current	I _{DD}			20	mA	
Output Type		HCMOS/TTL Compatible				
Output Load		15			pF	
Symmetry (duty cycle)	T _{DC}	45		55	%	@ 50% of waveform
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
Rise/Fall Time	t _R /t _F			6	ns	From 20% to 80% V _{DD}
Start-up Time	t _{SU}			10	ms	

Environmental Conditions:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g, 6 ms duration, ½ sine wave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g from 10 Hz to 2000 Hz)
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55 °C to +125 °C, 15 min. dwell, 10 cycles)
Hermeticity	Per MIL-STD-202, Method 112, (1x10 ⁻⁸ atm. cc/s of Helium)
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	5.0 x 7.0 x 1.7 mm, 4-pad Ceramic Leadless Chip Carrier (M2 type)

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Mechanical, Marking and Layout Information:

Pad	Function
1	N/C
2	Ground
3	Output
4	+V _{DD}

Part Marking	
Line 1	M2002T163
Line 2	49M6640
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code

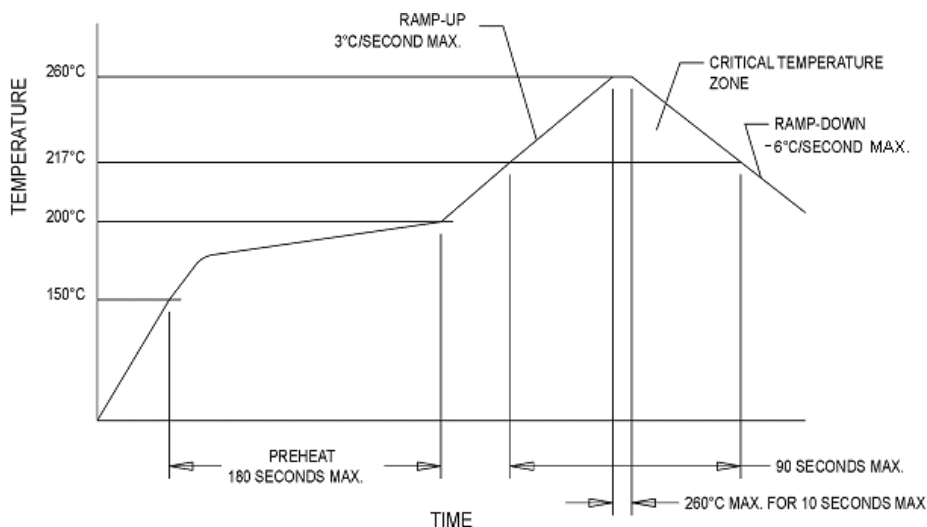
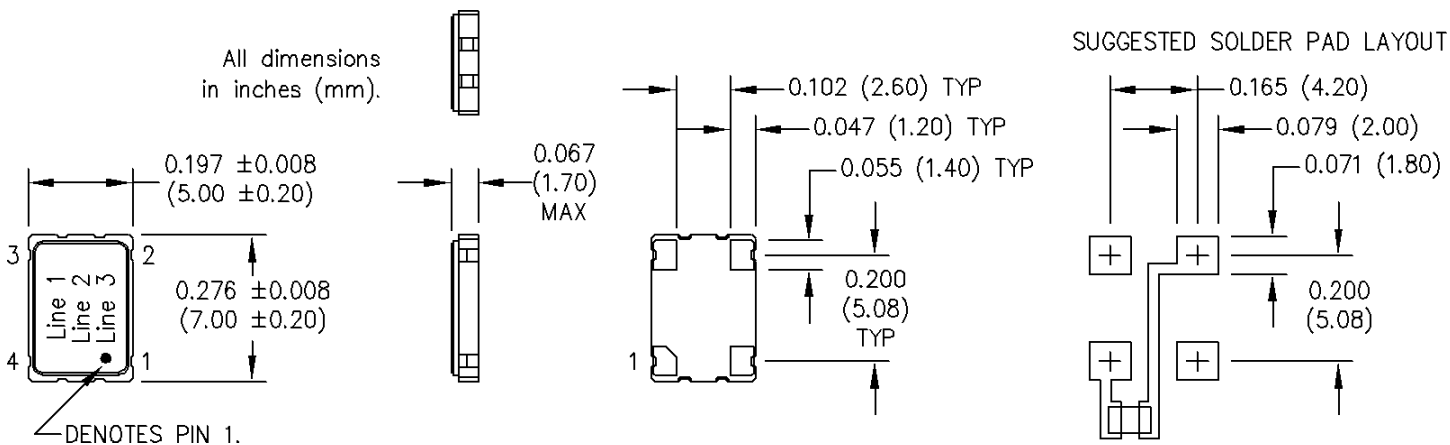


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
02/05/13	0	LEO	Original release.