

SPECIFICATION FOR CML SMT OSCILLATOR

MtronPTI P/N: M2102S007

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		25.000000		MHz	
Frequency Stability	ΔF/F	-20		+20	ppm	Inclusive of initial tolerance, deviation over temperature, shock, vibration, voltage and aging
Frequency Tolerance		-7		+7	ppm	@ +25°C
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Operating Voltage	V _{DD}	1.71	1.8	1.89	V	
Operating Current	I _{DD}			125	mA	
Output Type		CML				
Output Load		100 Ω Differential				
Symmetry (duty cycle)	T _{DC}	45	50	55	%	@ 50% of waveform
Differential Voltage	V _{OD}	350	425	500	mV _{PP}	CML
Rise/Fall Time	T _R /T _F			0.35	ns	From 20% to 80% of Waveform
Tri-state Enable Logic		80% V _{DD} or N/C			V	Pad 2: Output Enabled
Tri-state Disable Logic				0.5	V	Pad 2: Output to high-Z
Phase Jitter	Φ _J		0.25		pS RMS	Integrated 12kHz to 20 MHz

Environmental Conditions:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sine wave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻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 1.75 mm, 6-pad Ceramic Leadless Chip Carrier.
Moisture Sensitivity Level	1

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Mechanical, Marking and Layout Information:

Pad	Function
1	No Connection
2	Enable/Disable
3	Ground
4	Output
5	Complementary Output
6	+V _{DD}

Part Marking	
Line 1	M2102S007
Line 2	25M0000
Line 3	M yywwwvv

Legend	
M	MtronPTI logo
yy	Year
ww	Work week
vv	Factory code

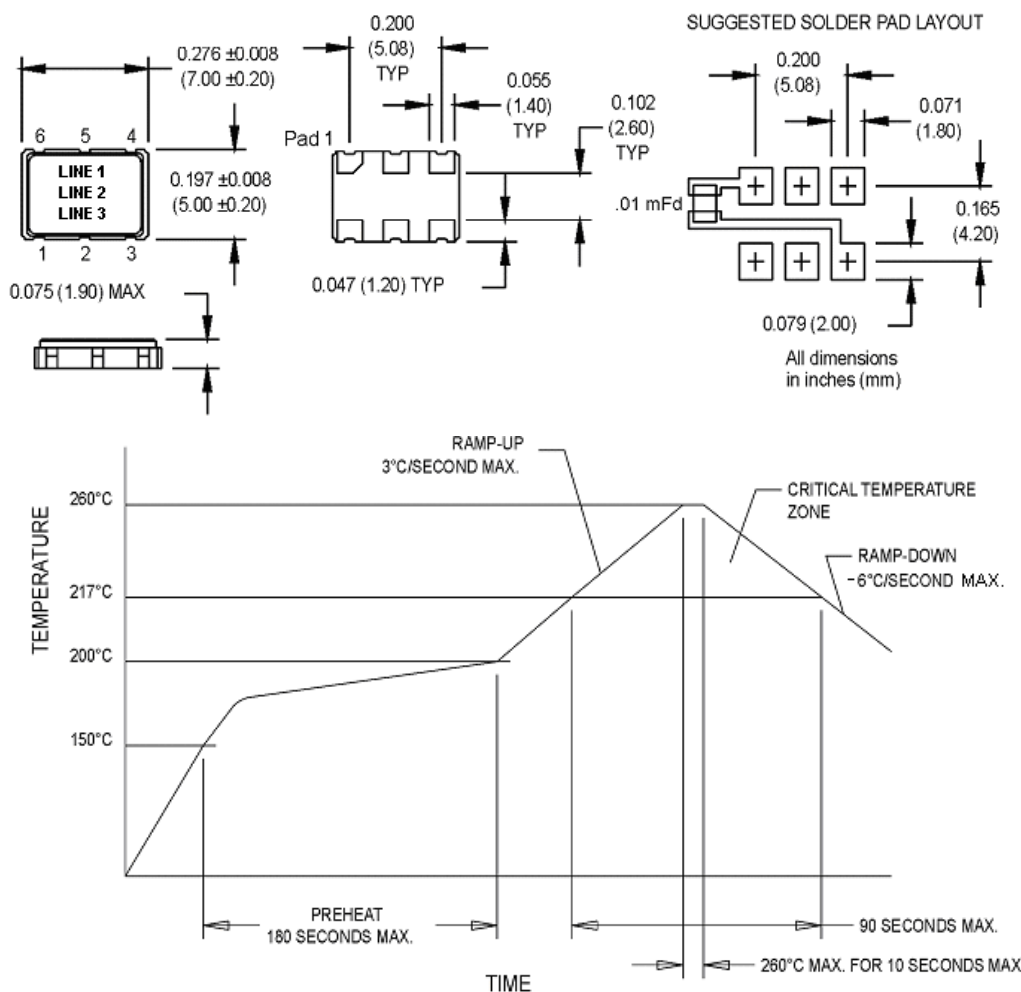


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
08/09/12	0	LEO	Original release.
08/29/12	A	LEO	Updated Differential Voltage Spec and minor layout changes.