



## SPECIFICATION FOR EXTENDED TEMPERATURE SMT OSCILLATOR MtronPTI P/N M2002T218

### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>O</sub>		25.000000		MHz	
<b>Frequency Stability</b>						
Frequency Stability	ΔF/F	-100		+100	ppm	Inclusive of initial tolerance at +25°C, deviation over temperature, variations due to shock, vibration, load, voltage and 1 <sup>st</sup> year aging at +25°C.
<b>RF Output</b>						
Output Type		HCMOS/TTL Compatible				
Output Load				15/10	pF/TTL	
Symmetry (duty cycle)	T <sub>DC</sub>	45	50	55	%	Ref to ½ V <sub>DD</sub>
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			5	nS	10% to 90% V <sub>DD</sub> HCMOS load
Logic "1" Level	V <sub>OH</sub>	90% V <sub>DD</sub>			V	HCMOS load
Logic "0" Level	V <sub>OL</sub>			10% V <sub>DD</sub>	V	HCMOS load
Output Current	I <sub>OH</sub>			-8	mA	
	I <sub>OL</sub>			+8	mA	
Tristate Function		80% V <sub>DD</sub> OR N/C			V	Pad1: Output Enabled
				20% V <sub>DD</sub>	V	Pad1: Output Disabled to high-Z
Start-Up Time				5	mS	
<b>Additional Specifications</b>						
Random Jitter			5	12	pS	1-Sigma
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>DD</sub>	3.135	3.3	3.465	V	
Operating Current	I <sub>DD</sub>			35	mA	

### Environmental & Mechanical Requirements:

Operating Temperature	T <sub>A</sub>	-55		+125	°C	
Storage Temperature	T <sub>S</sub>	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)					
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 <sup>-8</sup> atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	4-pad 5 X 7 X 1.9 mm leadless ceramic.					

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### Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Tristate
2	Ground
3	Output
4	+V <sub>DD</sub>

Part Marking	
Line 1	M2002T218
Line 2	25M0000
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code

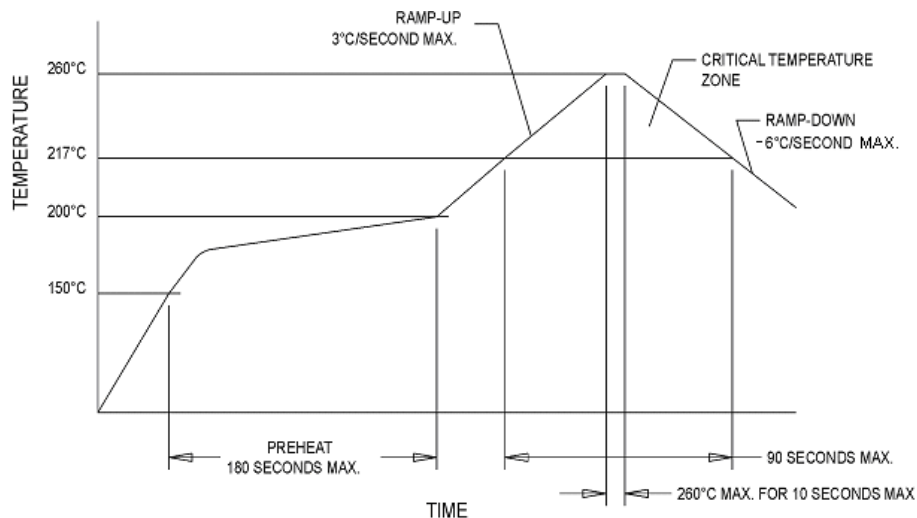
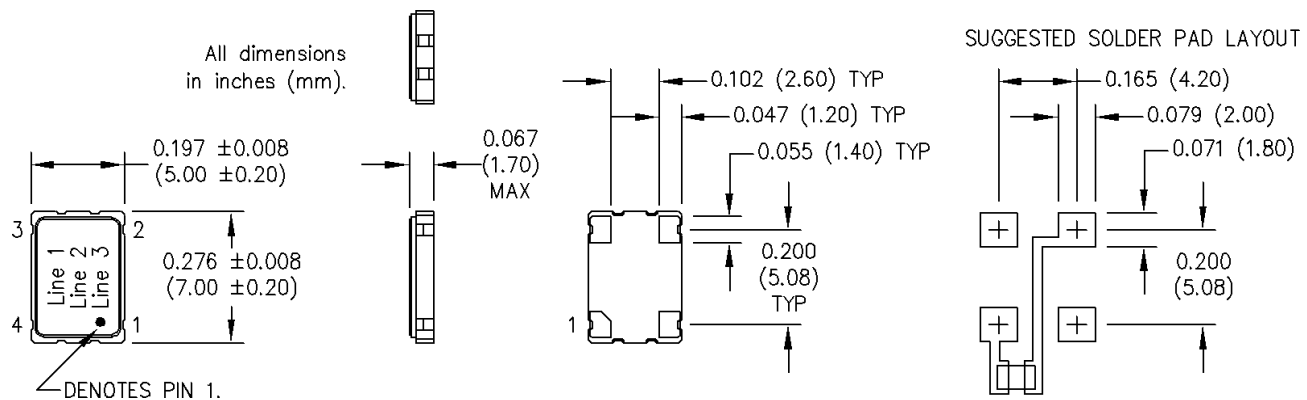


Figure 1

### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
1/29/14	0	MM	Original release.