



Specifications for a Stratum 3 SMT TCXO MtronPTI P/N M6151S006

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		20.000000		MHz	
Frequency Tolerance		-1.0		+1.0	ppm	@ +25°C
Frequency Stability						
Frequency Stability	ΔF/F			0.30	ppm	Over operating temperature relative to +25°C (F _{Max} – F _{Min})/2
Holdover Stability				0.34	ppm	Inclusive of drift after 24hrs and deviation over operating temperature.
Overall Stability		-4.6		+4.6	ppm	Includes initial calibration @ +25°C, deviation over temperature, holdover, variations due to supply voltage, load, reflow soldering, and 20 yr. aging @ +40°C.
Frequency Vs. Reflow		-1.0		+1.0	ppm	
Frequency Vs. Supply			± 0.02	± 0.1	ppm	For a 5% supply change
Frequency Vs. Load			± 0.02	± 0.1	ppm	For 5% load change
Output						
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	40	50	60		@ 50% of V _{DD}
Output Logic Levels	V _{OL}	10% V _{DD}			V	
Output Level	V _{OH}			90% V _{DD}	V	
Rise/Fall Time				7	nS	Ref. 10% and 90%
Frequency Adjustment		± 9.2			ppm	Over Control Voltage Range
Control Voltage Range		0.3	1.65	3.0	V	
Additional Specifications						
Tri-state Enable Logic		70% V _{DD} or floating			V	Pad 8
Tri-state Disable Logic				30% V _{DD}	V	Pad 8. Output to high-Z
Start-up Time	T _{SU}			10	mS	
Phase Noise			-93		dBc/Hz	@ 10 Hz
			-122		dBc/Hz	@ 100 Hz
			-144		dBc/Hz	@ 1 kHz
			-154		dBc/Hz	@ 10 kHz
			-155		dBc/Hz	@ 100 kHz
Supply Voltage/Current & Temperature Ranges						
Operating Voltage	V _{DD}	3.135	3.3	3.465	V	
Operating Current	I _{DD}			4.0	mA	
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	

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)
Solderability	Per EIAJ-STD-002
Max.Soldering Conditions	See solder profile, Figure 1
Package Type	5.0 x 7.0 x 2.0mm, 10-pad Ceramic Leadless Chip Carrier. RoHS Compliant.



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Mechanical, Marking and Layout Information:

Pad	Function
1	N/C
2	N/C
3	N/C
4	Ground/Case
5	Output
6	N/C
7	N/C
8	Tri-state
9	+V _{DD}
10	Control Voltage

Part Marking	
Line 1	M61 ym
Line 2	20M000

Legend	
Y	Year
m	Month

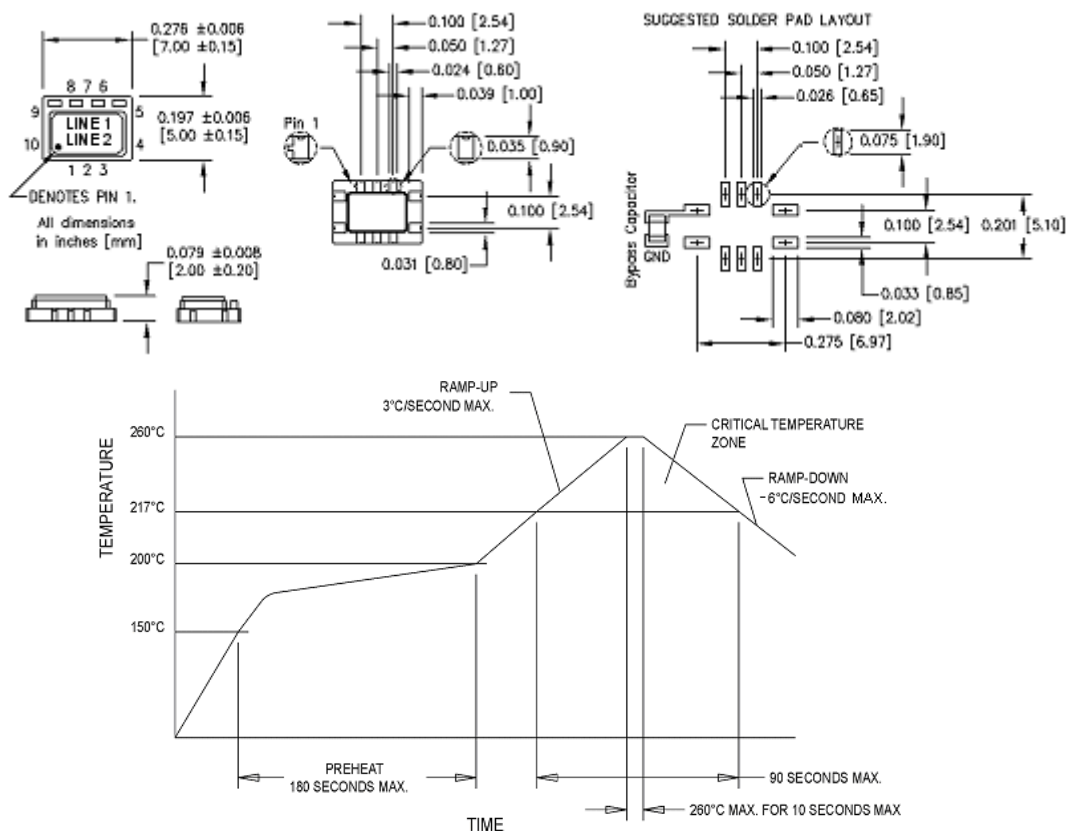


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
3/28/13	0	TOY	Original Release.