

## SPECIFICATION FOR RoHS 6 COMPLIANT SMT TCXO

### MtronPTI P/N M6161S023

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>O</sub>		12.8000000		MHz	
Initial Accuracy	F <sub>I</sub>	-1.0		+1.0	ppm	@ 25°C
Frequency Stability	ΔF/F	-0.3		+0.3	ppm	Over operating temperature (F <sub>Max</sub> – F <sub>Min</sub> )/2
Frequency Vs. Reflow		-1.0		+1.0	ppm	
Frequency Vs. Supply			± 0.02	± 0.1	ppm	For 5% supply change
Frequency Vs. Load			± 0.02	± 0.1	ppm	For 5% load change
Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Operating Voltage	V <sub>DD</sub>	3.135	3.3	3.465	V	
Operating Current	I <sub>DD</sub>			3.2	mA	
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T <sub>DC</sub>	45	50	55	%	@ 50% of V <sub>DD</sub>
Logic "1" Level	V <sub>OH</sub>	80% V <sub>DD</sub>			V	HCMOS load
Logic "0" Level	V <sub>OL</sub>			20% V <sub>DD</sub>	V	HCMOS load
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			7	nS	From 10% to 90% V <sub>DD</sub>
Tri-state Enable Logic		70% V <sub>DD</sub>			V	Pad 8
Tri-state Disable Logic				30% V <sub>DD</sub>	V	Pad 8. Output to high-Z
Phase Noise			-102		dBc/Hz	@ 10 Hz
			-132		dBc/Hz	@ 100 Hz
			-150		dBc/Hz	@ 1 kHz
			-155		dBc/Hz	@ 10 kHz
			-156		dBc/Hz	@ 100 kHz

#### Environmental Conditions:

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)
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm cc/s of Helium) (Crystal Only)
Storage Temperature	-55°C to +125°C
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	5.0 x 7.0 x 2.0 mm, 10-pad Ceramic Leadless Chip Carrier

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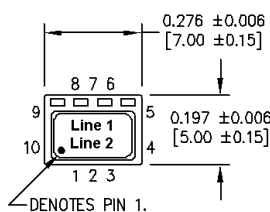
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#### Mechanical, Marking and Layout Information:

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 <sub>DD</sub>
10	N/C

Part Marking	
Line 1	M61 ym
Line 2	12M800

Legend	
Y	Year
m	Month



All dimensions  
in inches [mm]

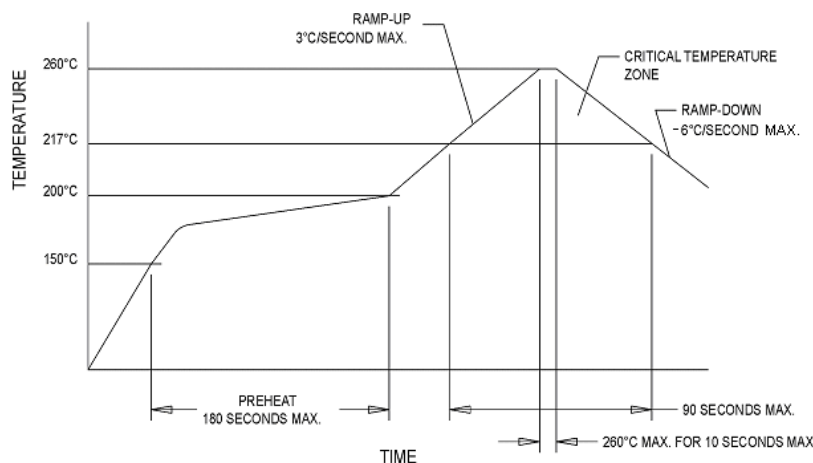
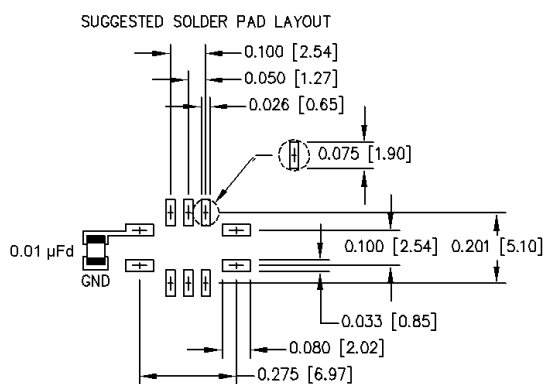
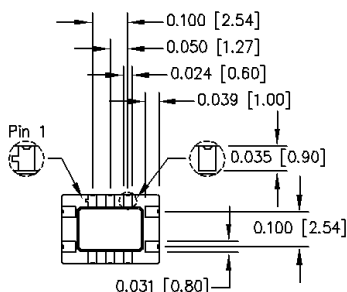
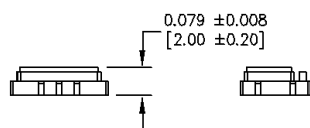


Figure 1

#### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
4/5/13	0	MM	Original release.