



## SPECIFICATION FOR SMT VCTCXO

### MtronPTI P/N: M6054S031

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>o</sub>		13.00000		MHz	
Frequency Tolerance				±1	ppm	@ 25°C, at time of shipping
<b>Frequency Stability</b>						
Frequency Stability	ΔF/F			±5.0	ppm	
Frequency Vs. Supply	ΔF <sub>VDD</sub> /F			±0.2	ppm	For ±5% voltage change
Frequency Vs. Output Load				±0.2	ppm	For ±10% output load change
Frequency Vs. Aging				±1.0	ppm	Per year
<b>Output</b>						
Output Type			Clipped Sinewave			
Output Load			10kΩ    10pF			
Output Level		0.8			V	pk-pk
Startup Time	T <sub>SU</sub>			2	mS	
<b>Voltage Tuning</b>						
Tuning Voltage		0.50	1.50	2.50	V	Pad 1
Tuning Range		-8		+8	ppm	Ref. to frequency with V <sub>c</sub> =1.50
Input Impedance	Z <sub>IN</sub>	100			KΩ	
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>DD</sub>	2.8	3.0	3.3	V	
Operating Current	I <sub>DD</sub>			1.5	mA	

#### Environmental Conditions:

Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Storage Temperature	T <sub>S</sub>	-40		+85	°C	
Mechanical Shock	Per MIL-STD-202, Method 213 (2000 g, 0.3 ms duration, ½ sine wave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Hermeticity	Per MIL-STD-202, Method 112 (1x10 <sup>-8</sup> atm.cc/s of helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	5.0 x 3.2 x 1.1 mm, Ceramic Leadless Chip Carrier (M6054 Series)					

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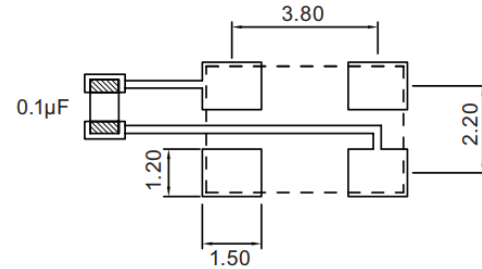
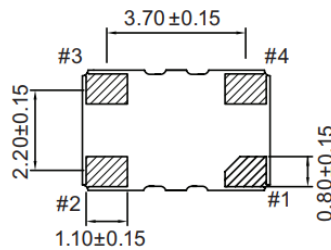
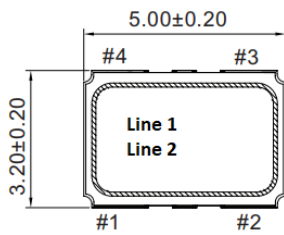
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#### Mechanical, Marking and Layout Information:

Part Marking	
Line 1	13M000
Line 2	• M yy ww vv

Legend	
yy	Last 2 digits of year
ww	Week number
vv	Factory Code
•	Pin 1 Indicator

Pad	Function
1	Tuning Voltage
2	GND
3	Output
4	+V <sub>DD</sub>



For optimal performance, place a 0.1µF bypass capacitor as close to V<sub>dd</sub> and GND as possible

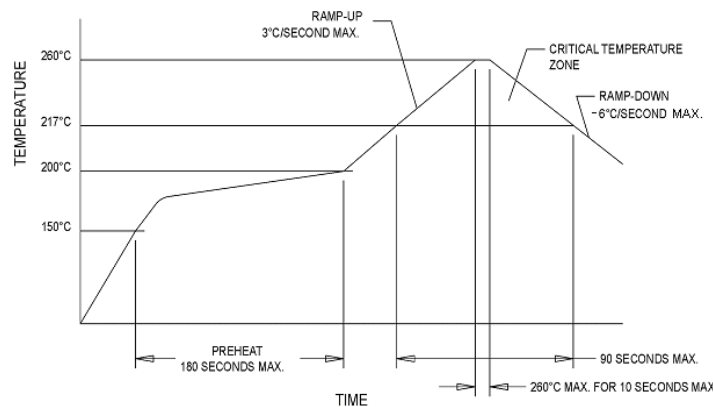
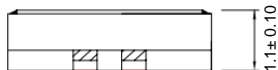


Figure 1

#### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
11-01-19	A	BRR	Original Release.