MtronPTI ...when timing matters

1703 E. Highway 50 Yankton, SD 57078 USA
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PRELIMINARY SPECIFICATION FOR SMT VCTCXO
MtronPTI P/N M6161S052

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		10.000000		MHz	
Frequency Tolerance		-1.0		+1.0		@ +25°C
Frequency Stability						
Frequency Stability	ΔF/F			0.5	ppm	$(F_{max} – F_{min})/2$
Aging		-2.0		+2.0	ppm	1st year
Frequency Vs. Supply			± 0.02	± 0.1	ppm	For 5% supply variation
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 VDD
Output Logic Levels	V_{OL}			20	% V_{CC}	
Output Level	V_{OH}	80			% V_{CC}	
Rise/Fall Time				6.5	ns	Ref. 10% and 90%
Tristate Function		Logic “1”, or floating, output Enabled. Logic “0”, output Disabled.				Pad 8
Start-up Time	T_{SU}			10	ms	
Frequency Adjustment						
Adjustment Method		External Voltage				
Control Voltage Range	V_C	+0.3	1.65	+3.0	V_{DC}	Pad 10
Tuning Range		±5			ppm	Positive slope.
Linearity				5	%	
Input Impedance	Z_{IN}	100			KΩ	
Supply Voltage & Power Consumption						
Operating Voltage	V_{DD}	3.135	3.3	3.465	V	
Operating Current	I_{DD}			4.0	mA	

Environmental Conditions:

Operating Temperature	T_A	0		+70	°C	
Storage Temperature	T_S	-40		+90	°C	
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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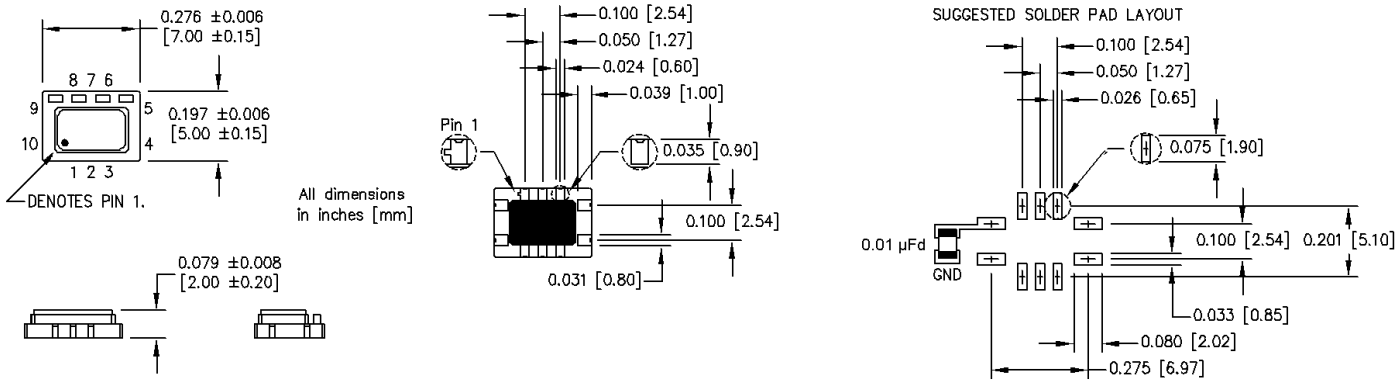
Mechanical, Marking and Layout Information:

Pad	Function
1	N/C
2	N/C
3	N/C
4	Ground/Case
5	Output
6	N/C
7	N/C
8	Tristate
9	$+V_{DD}$
10	Control Voltage



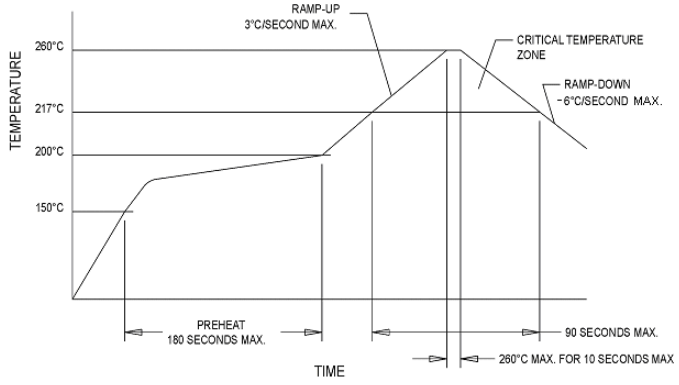


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
12/08/16	0	MM	Original Release.
12/16/16	A	MM	Corrected Aging specification.
2/15/17	B	MM	Changed to VCTCXO.