MtronPTI

...when timing matters

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SPECIFICATION FOR SMT VCTCXO
MtronPTI P/N M6164S017

Electrical Specifications:

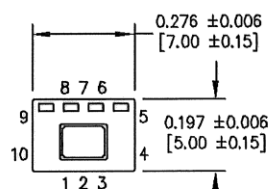| Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		40.000000		MHz	
Frequency Tolerance		-1.0		+1.0	ppm	@ +25°C
Frequency Stabilities						
Frequency vs. Temperature	$\Delta F/F$			1.0	ppm	$(F_{MAX}-F_{MIN})/2$
Frequency vs. Reflow		-1.0		+1.0	ppm	
Aging		-1.0		+1.0	ppm	1st year
Frequency Deviation Slope				250	ppb/°C	Over operating temperature range.
Frequency vs. Supply	F_{VS}		± 0.02	± 0.1	ppm	For 5% voltage change
Frequency vs. Load	F_L		± 0.02	± 0.1	ppm	For 5% load change
Output						
Output Type			Clipped Sine Wave			
Output Load			10kΩ // 10pF			
Output Level	V_{OUT}	0.8			V_{pk-pk}	
Tri-state Function		Logic "1", or floating, output Enabled. Logic "0", output Disabled.				Pad 8
Start-up Time	T_{SU}			10	mS	
Frequency Adjustment						
Control Voltage Range	V_C	+0.3	1.65	+3.0	V_{DC}	Pad 10
Tuning Range		± 8.0			ppm	Positive slope.
Linearity				5	%	
Input Impedance	Z_{IN}	100			KΩ	
Additional Specifications						
SSB Phase Noise (Under Static Conditions)			-88		dBc/Hz	@ 10Hz Offset
			-117			@ 100Hz Offset
			-140			@ 1kHz Offset
			-151			@ 10kHz Offset
			-155			@ 100kHz Offset
			-156			@ 1MHz Offset
G-sensitivity			0.6		ppb/g	
Supply Voltage & Power Consumption						
Operating Voltage	V_{DD}	3.135	3.3	3.465	V_{DC}	
Operating Current	I_{DD}			10	mA	

Environmental & Mechanical Requirements:

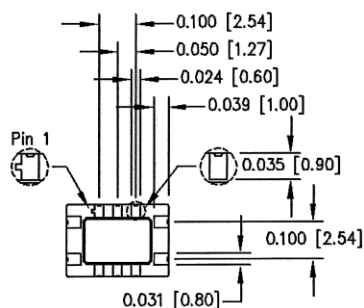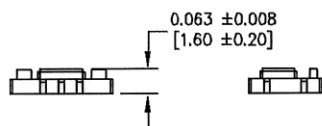| Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	T_S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sine wave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Solderability	Per MIL-STD-202, Method 208, except steam aging is not required					
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:

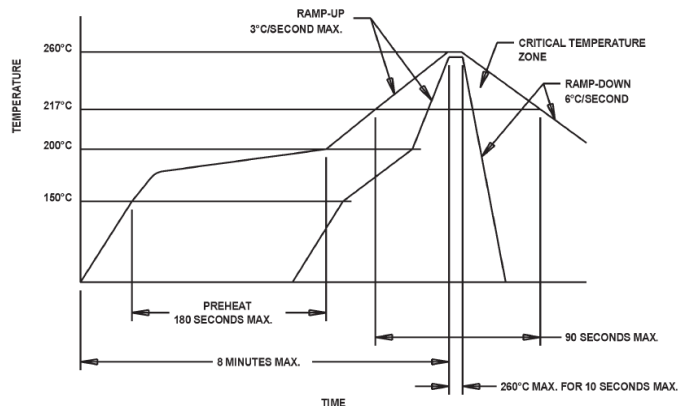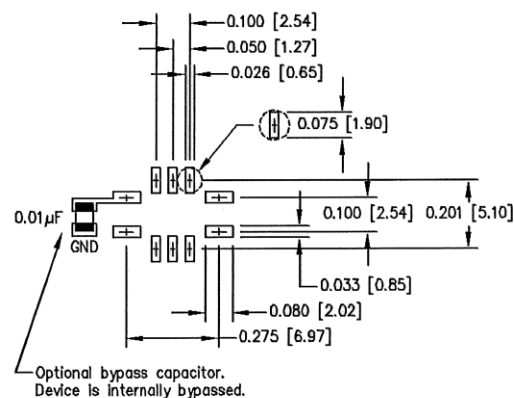| Pad	Function
1	N/C
2	N/C
3	N/C
4	Ground/Case
5	Output
6	N/C
7	N/C
8	Tristate
9	+V_{DD}
10	Control Voltage

Figure 1

Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
07/07/14	0	MM	Original Release.
07/17/14	A	MM	Updated device output per customer request.