

SPECIFICATION FOR SMT TCXO

MtronPTI P/N M6164S021

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 Stability						
vs Stability	ΔF _T /F			2.5	ppm	Over operating temperature range, (F _{MAX} -F _{MIN})/2
vs Aging		-5.0		+5.0	ppm	1 st year @ +25°C
		-10.0		+10.0		10 years @ +25°C
vs Supply	ΔF _{VDD} /F		± 0.02	± 0.1	ppm	For 5% supply variation
vs Load	ΔF _{LOAD} /F		± 0.02	± 0.1	ppm	For 5% load change
Allan Deviation				10x10 ⁻¹⁰		Tau = 100 msec
Output						
Output Type		Clipped Sine Wave				
Output Load		10kΩ // 10pF			pF	
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	
Additional Specifications						
Phase Noise			-55	-40	dBc/Hz	@ 1 Hz
			-90	-75		@ 10 Hz
			-118	-105		@ 100 Hz
			-140	-125		@ 1 kHz
			-151	-135		@ 10 kHz
			-156	-145		@ 100 kHz
			-156	-150		@ 1 MHz to 10 MHz
G-sensitivity			0.6		ppb/g	100 Hz to 1000 Hz
Supply Voltage & Power Consumption						
Operating Voltage	V _{DD}	3.135	3.3	3.465	V	
Operating Current	I _{DD}			3.0	mA	

Environmental Conditions:

Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Mechanical Shock	36,000 g's to be validated by customer.					
Vibration	20 g's from 10-2000 Hz swept sine					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium) (Crystal Only)					
Solderability	Per EIAJ-STD-002					
Humidity	Resistant to 85° R.H. at 85°C					
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	N/C

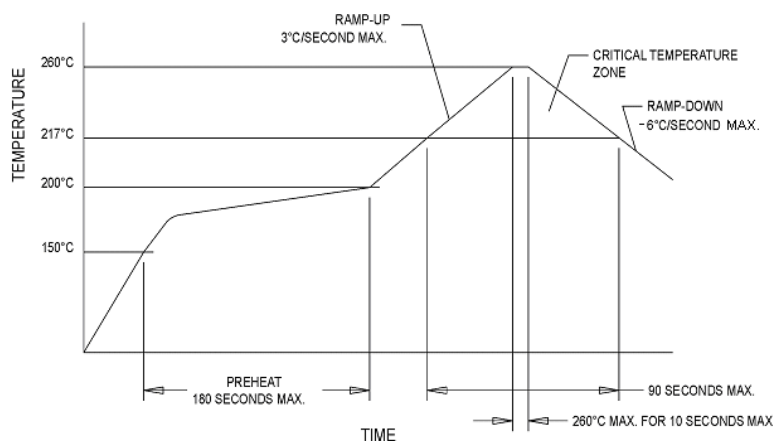
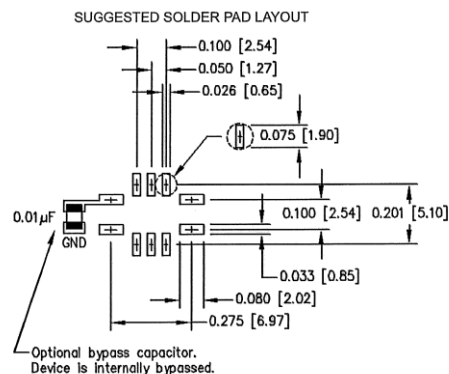
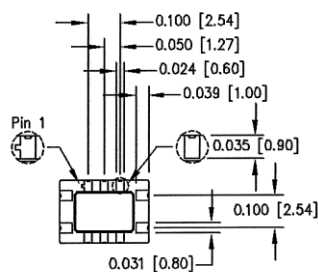
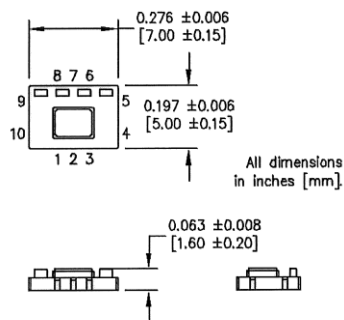


Figure 1

Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
12/05/14	0	MM	Original Release.
02/04/15	A	MM	Added Humidity specification.