

## SPECIFICATION FOR RoHS 6 COMPLIANT SMT TCXO

### MtronPTI P/N M6164S043

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>o</sub>		20.000000		MHz	
Frequency Tolerance		-1.0		+1.0		@ +25°C
<b>Frequency Stabilities</b>						
vs Temperature	ΔF/F	-4.6		+4.6	ppm	Over operating temperature range (Relative to frequency @ +25°C)
vs Aging		-4.0		+4.0	ppm	10 years @ +55°C
vs. Supply	F <sub>VS</sub>		± 0.02	± 0.1	ppm	For 5% voltage change
vs. Load	F <sub>L</sub>		± 0.02	± 0.1	ppm	For 5% load change
<b>Output</b>						
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T <sub>DC</sub>	40	50	60	%	@ 50% of V <sub>DD</sub>
Output Logic Levels	V <sub>OL</sub>			20	% V <sub>DD</sub>	
Output Level	V <sub>OH</sub>	80			% V <sub>DD</sub>	
Rise/Fall Time				6.5	nS	Ref. 10% and 90%
Tri-state Function		Logic "1", or floating, output Enabled. Logic "0", output Disabled.				Pad 8
Start-up Time	T <sub>SU</sub>			10	mS	
<b>Additional Specifications</b>						
SSB Phase Noise (Under Static Conditions)			-101		dBc/Hz	@ 10Hz Offset
			-123			@ 100Hz Offset
			-145			@ 1kHz Offset
			-155			@ 10kHz Offset
			-156			@ 100kHz Offset
G-sensitivity			0.6	1.2	ppb/g	See Table 1
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>DD</sub>	3.135	3.3	3.465	V <sub>DC</sub>	
Operating Current	I <sub>DD</sub>			5	mA	

#### Environmental & Mechanical Requirements:

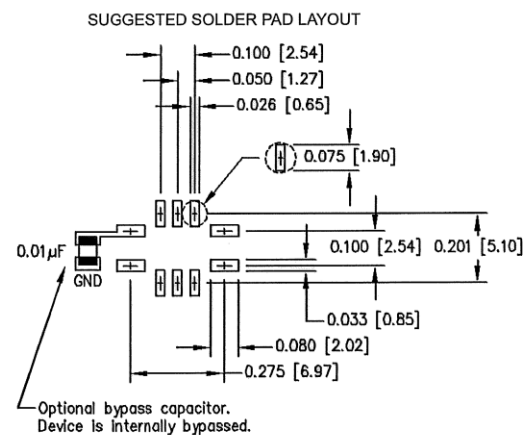
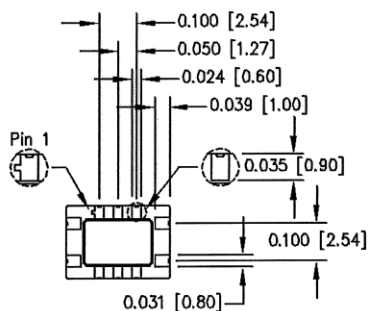
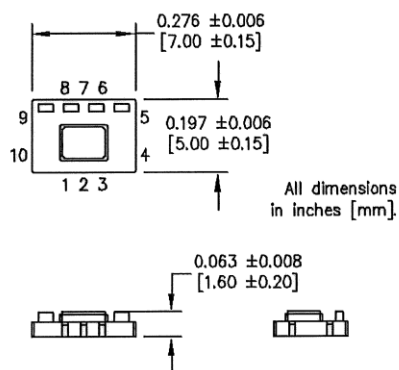
Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Storage Temperature	T <sub>S</sub>	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sine wave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000Hz)					
Solderability	Per MIL-STD-202, Method 208, except steam aging is not required					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	5.0 x 7.0 x 1.6mm, 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 <sub>DD</sub>
10	N/C



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#### Solder Profile:

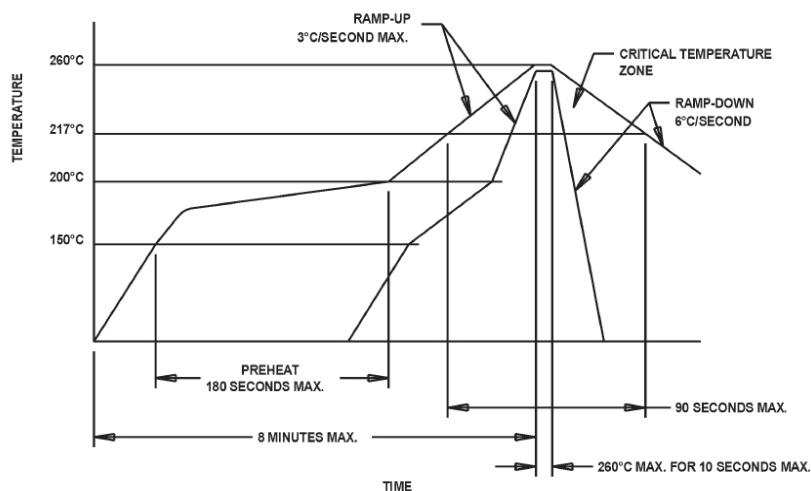
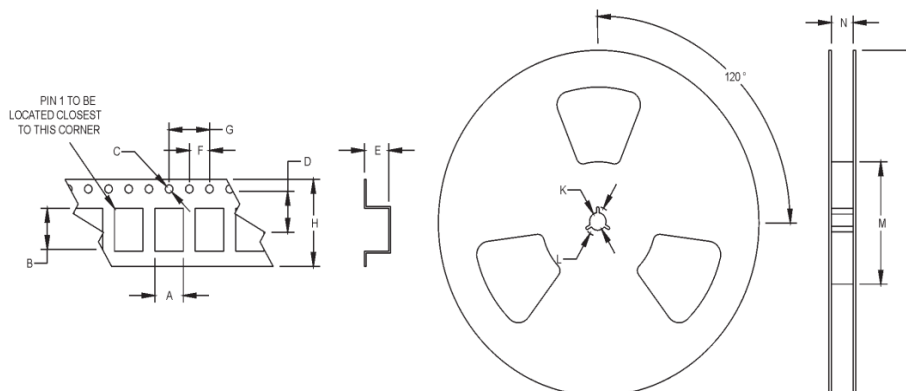


Figure 1

#### Tape and Reel Specifications:

All units in mm



Tape and Reel Specifications											
A	B	C	D	E	F	G	H	J	K	L	M
5.32	7.28	1.5	7.5	2.2	4	8	16	178	13.5	24.8	80

#### Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
01/26/18	0	MM	Original Release.