MtronPTI ...when timing matters

1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

SPECIFICATION FOR RoHS 6 COMPLIANT SMT VCTCXO
MtronPTI P/N M6181S028

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		50.000000		MHz	
Frequency Tolerance		-1.0		+1.0	ppm	@ +25°C
Frequency Stability						
vs Stability	$\Delta F_T/F$			0.2	ppm	$(F_{MAX}-F_{MIN})/2$
vs Supply	$\Delta F_{VDD}/F$		± 0.02	± 0.1	ppm	For 5% supply variation
vs Load	$\Delta F_{LOAD}/F$		± 0.02	± 0.1	ppm	For 5% load change
Aging				±2.0	ppm	1st year
				±5.0	ppm	10 years
Output						
Output Type		Clipped Sine Wave				
Output Load		10kΩ || 10*pF*				
Output Level	V_{OUT}	0.8			V_{pk-pk}	
Tristate Function		70			% V_{DD}	Pad C: Output Enabled
				30	% V_{DD}	Pad C: Output Disabled
Startup Time	t_{SU}			10	ms	
Frequency Adjustment						
Control Voltage Range	V_C	0.3	1.65	3.0	V_{DC}	Pad 1
Tuning Range		±5			ppm	Positive slope
Linearity				5	%	
Input Resistance		100			kΩ	
Modulation Bandwidth		2			kHz	
Additional Specifications						
Phase Noise			-80		dBc/Hz	@ 10 Hz
			-108		dBc/Hz	@ 100 Hz
			-132		dBc/Hz	@ 1 kHz
			-149		dBc/Hz	@ 10 kHz
			-156		dBc/Hz	@ 100 kHz
Supply Voltage/Current & Temperature Ranges						
Operating Voltage	V_{DD}	3.135	3.3	3.465	V	
Operating Current	I_{DD}			6.5	mA	

Environmental Conditions:

Operating Temperature	TA	+10		+85	°C	
Storage Temperature	T_S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g, 6 ms duration, ½ sine wave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g from 10 Hz to 2000 Hz)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	5.0 x 3.2 x 1.58 mm, Ceramic Leadless Chip Carrier. RoHS Compliant (M618x Series)					

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Mechanical, Marking and Layout Information:

Pad	Function
1	Control Voltage
A	N/C
B	N/C
2	Ground/Case
3	Output
C	N/C or Tristate
D	N/C or Phase Noise Filter
4	Supply Voltage

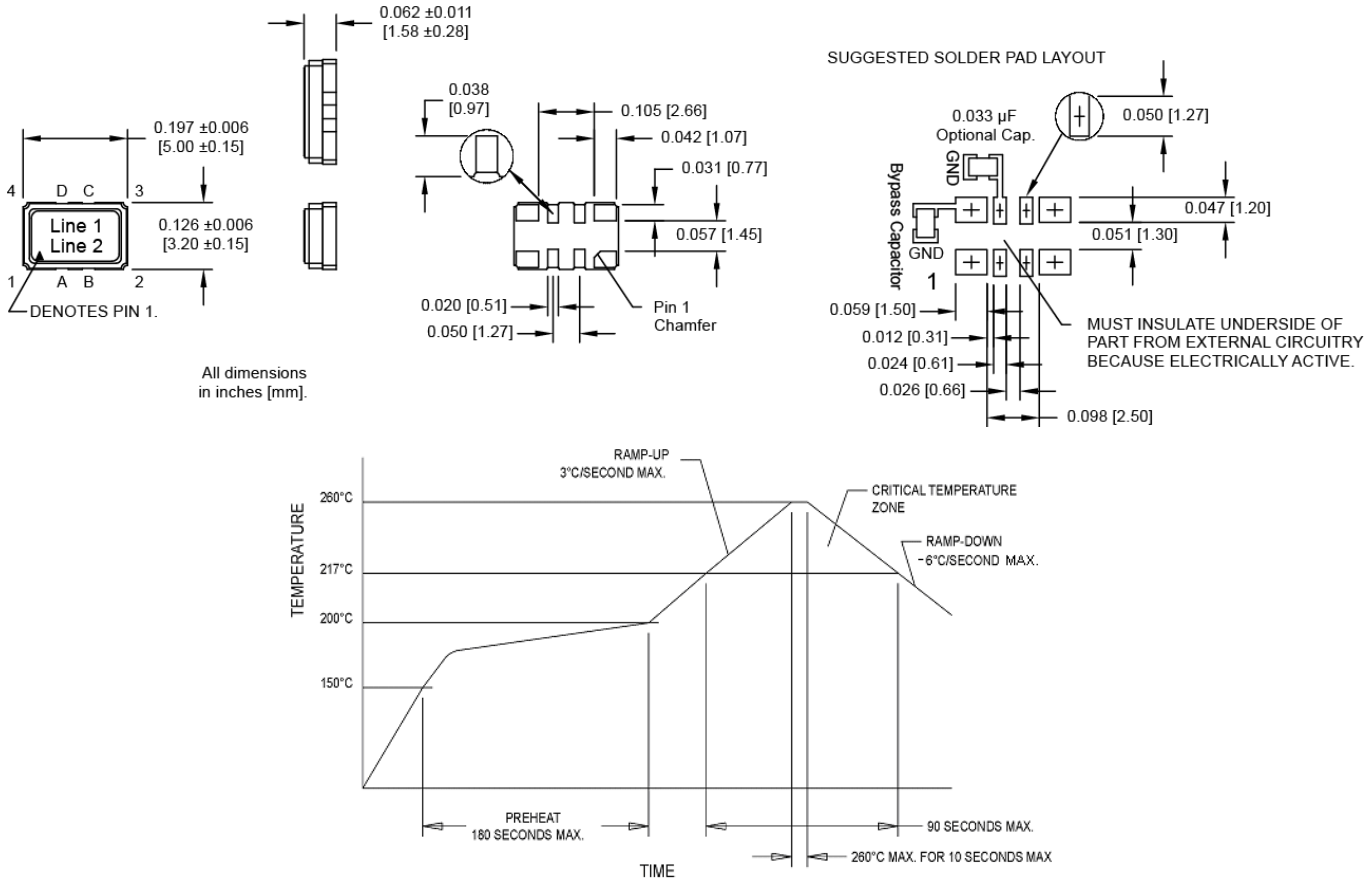

Figure 1

Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
12/11/19	B	BRR	Preliminary marking removed
12/05/19	A	BRR	Frequency Adjustment added
12/03/18	0	MM	Original Release.