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 HCMOS SMT OSCILLATOR
MtronPTI P/N M2002T188

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		125.006250		MHz	
Frequency Stability						
vs. Temperature	ΔF/F	-20		+20	ppm	Inclusive of initial tolerance at +25°C, deviation over temperature, shock, vibration, voltage & load variations and 1 year aging
RF Output						
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T_{DC}	45	50	55	%	Ref to ½ V_{DD}
Logic "1" Level	V_{OH}	90% V_{DD}			V	HCMOS load
Logic "0" Level	V_{OL}			10% V_{DD}	V	HCMOS load
Rise/Fall Time	T_R/T_F			2.0	nS	From 10% to 90% V_{DD}
Tristate Logic		80% V_{DD} or N/C			V	Pad 1: Output Enabled
				20% V_{DD}	V	Pad 1: Output Disabled to high-Z
Supply Voltage & Power Consumption						
Operating Voltage	V_{DD}	2.97	3.3	3.63	V	
Operating Current	I_{DD}			55	mA	
Additional Specifications						
Period Jitter	R_J		5		pS RMS	1-Sigma

Environmental & Mechanical Requirements:

Operating Temperature	T_A	-10		+70	°C	
Storage Temperature	T_S	-55		+125	°C	
Mechanical Shock	Per JESD22-B-104-A 1500g Peak 0.5 msec duration 5 pulses in 6 directions					
Vibration	Per JESD22-B-103-A 20g Peak (20-2000 Hz) in X, Y and Z directions					
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)					
ESD-Human Body Model	2000 volts; Per JESD22A-114-A					
ESD-Machine Model	200 volts; Per JESD22A-115-A					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	5.0 x 7.0 x 1.7 mm, 4-pad Ceramic Leadless Chip Carrier (M2 type)					
Termination (Pad) Material	10 to 15 µm of tungsten (W), 1.29 to 8.89 µm of nickel (Ni), 0.3 to 1.0 µm of gold (Au)					
Moisture Sensitivity Level	1					

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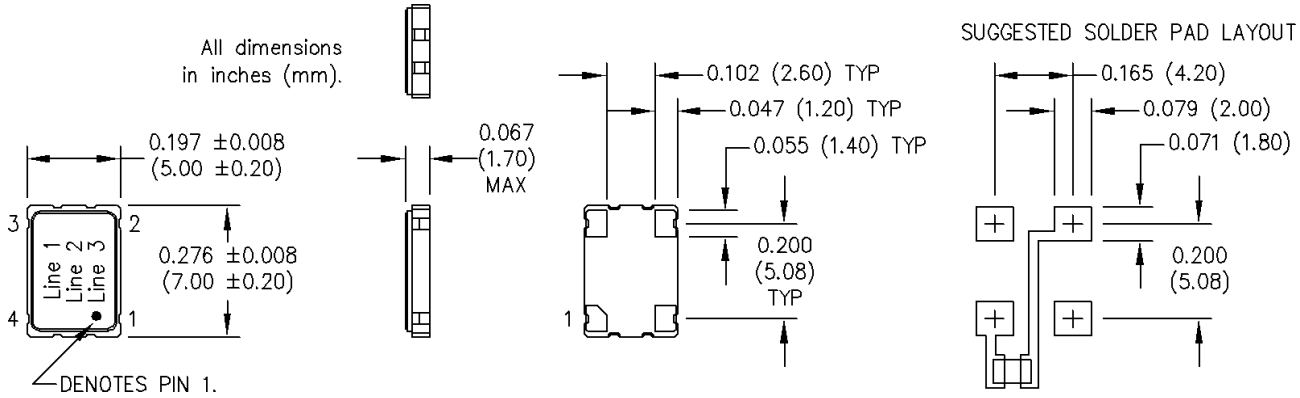
Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Tristate
2	Ground
3	Output
4	$+V_{DD}$

Part Marking	
Line 1	M2002T188
Line 2	125M0062
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code



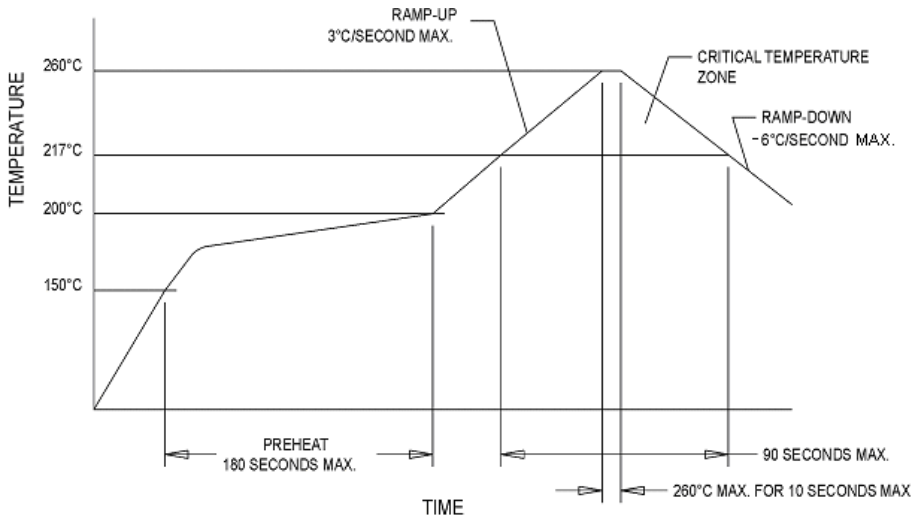


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
8/30/13	0	MM	Original release.