



SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR MtronPTI P/N M2002T194

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		20.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-20		+20	ppm	Includes initial accuracy @ +25°C and deviation over operating temperature range.
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			6	nS	From 20% to 80% V _{DD}
Start-Up Time				10	mS	
Standby Current				10	μA	
Standby 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}			10	mA	

Environmental & Mechanical Requirements:

Operating Temperature	T _A	-20		+70	°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 sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
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)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	4-pad 5 X 7 X 1.9 mm leadless ceramic.					

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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Standby
2	Ground
3	Output
4	+V _{DD}

Part Marking	
Line 1	M2002T194
Line 2	20M0000
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code

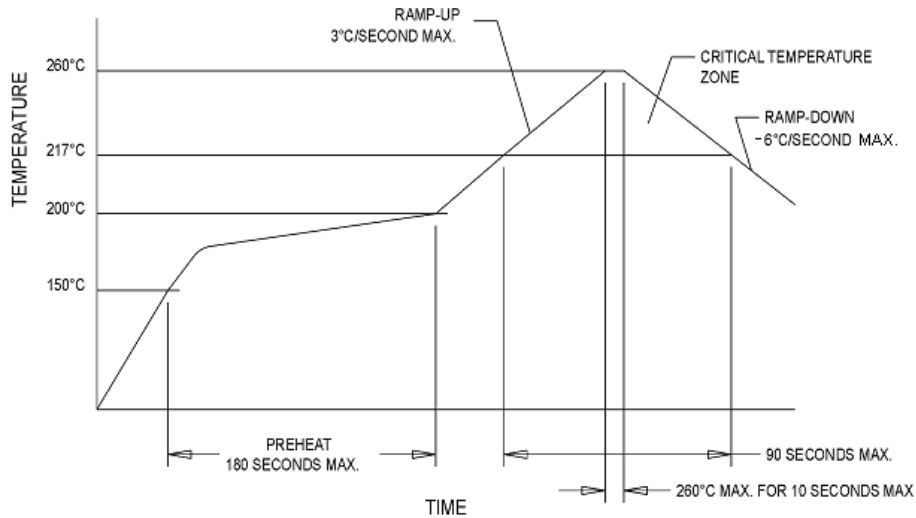
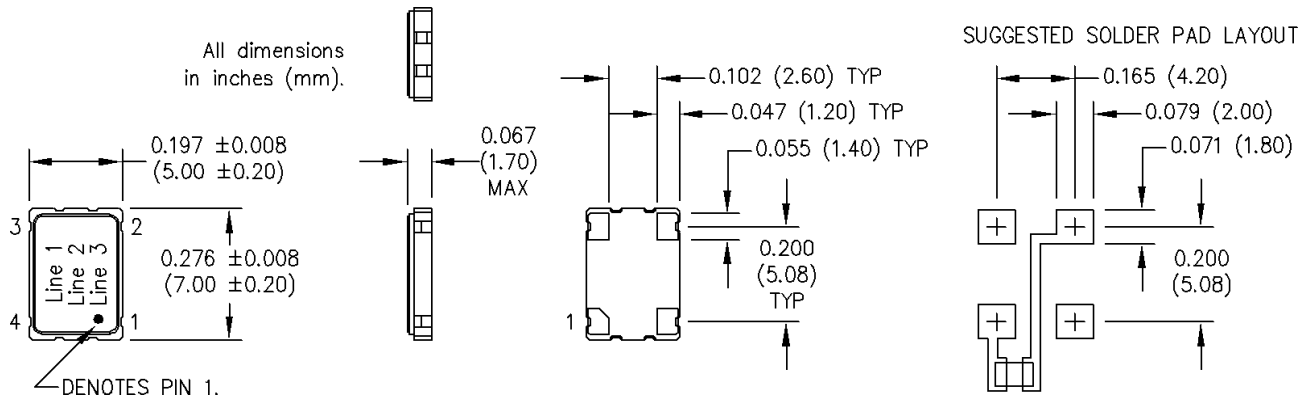


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
10/4/13	0	MM	Original release.