MtronPTI ...when timing matters

1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
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SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR
MtronPTI P/N M2002S785

I. General & Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		50.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-50		+50	ppm	Includes initial accuracy @ +25°C, deviation over temperature, supply voltage variation, load variation, shock and vibration.
Aging		-75		+75	ppm	20 years
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				50	pF	
Symmetry (duty cycle)	T_{DC}	40		60	%	Ref to ½ V_{DD}
Logic "1" Level	V_{OH}	2.8			V	HCMOS load
Logic "0" Level	V_{OL}			0.4	V	HCMOS load
Rise/Fall Time	T_R/T_F			6	nS	Ref. to 0.4 V to 2.8 V
Start-Up Time				10	mS	
Tristate Logic		Logic "1" or Open			V	Pad 1: Output Enabled
		Logic "0"			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}			25	mA	

II. Environmental & Mechanical Requirements:

Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	T_S	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition I					
Vibration	Per MIL-STD-202, Method 202 & 204 Condition C					
Thermal Shock	Per MIL-STD-202, Method 207, Condition B-1					
Seal	Per MIL-STD-202, Method 112, Condition C.					
Hermeticity	Per MIL-STD-202, Method 112, Condition C & D.					
Resistance to Solvents	Per MIL-STD-202, Method 215.					
Max. Soldering Conditions	See solder profile, Figure 1					
Solderability	Per MIL-STD-202, Method 208.					
Package Type	4-pad 5 X 7 X 1.8 mm leadless ceramic.					

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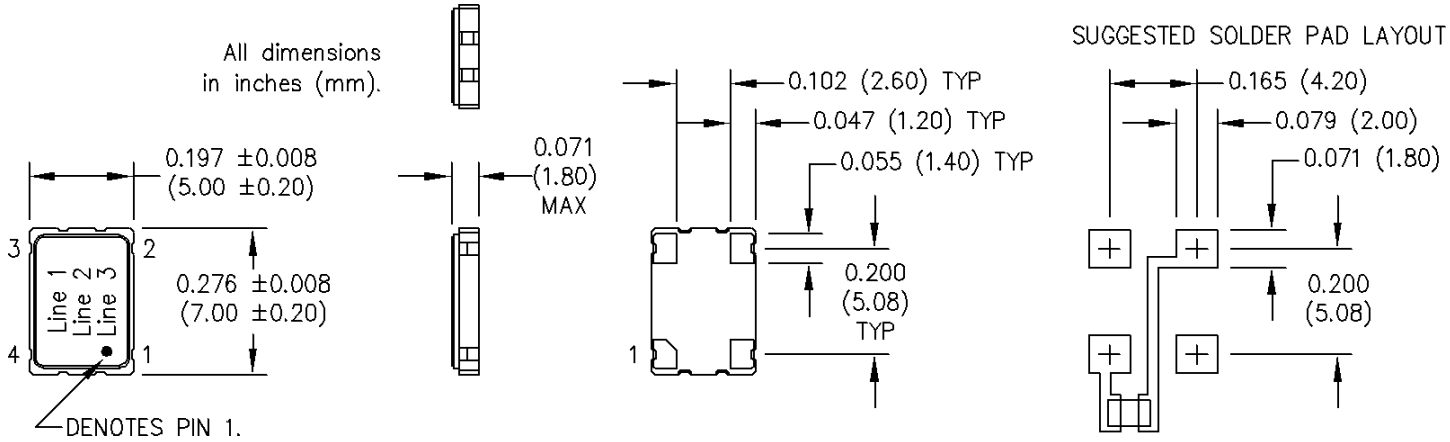
III. Dimensions, Marking, and Pin Out Information:

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

Part Marking	
Line 1	M2002S785
Line 2	50M0000
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code



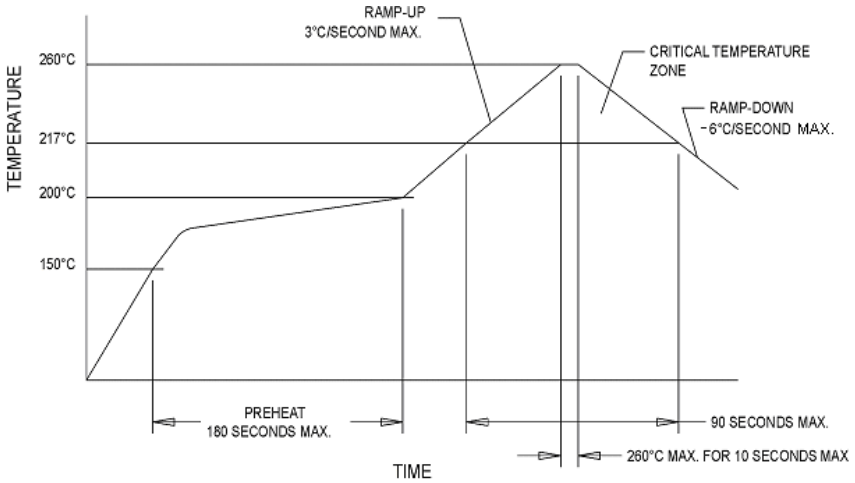


Figure 1

IV. Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
3/31/08	0	WNJ	Original release.
02/09/15	A	MM	Updated datasheet format.
02/06/19	B	MM	Updated device height.