



SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR MtronPTI P/N M2002S285

I. General & Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		32.768000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-100		+100	ppm	Includes initial accuracy @ +25°C and deviation over operating temperature range, voltage & load variations, shock, vibration, and aging.
RF Output						
Output Type		HCMOS/TTL Compatible				
Output Load				25	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}			0.4	V	HCMOS load
Rise/Fall Time	T _R /T _F			4	nS	Measured 20 to 80% Waveform
Start-Up Time				10	mS	
Tristate Logic		Logic "high" or "floating"			V	Pad 1: Output Enabled
		Logic "low"			V	Pad 1: Output Disabled to high-Z
Supply Voltage & Power Consumption						
Operating Voltage	V _{DD}	3.0	3.3	3.6	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 C (100 g's, 6 ms duration, ½ sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
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	5.0 x 7.0 x 1.9 mm, 4-pad Ceramic Leadless Chip Carrier (M2 type)					

III. Special Requirements:

1. Change notification required.

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IV. Dimensions, Marking, and Pin Out Information:

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

Part Marking	
Line 1	M2002S285
Line 2	32M7680
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code

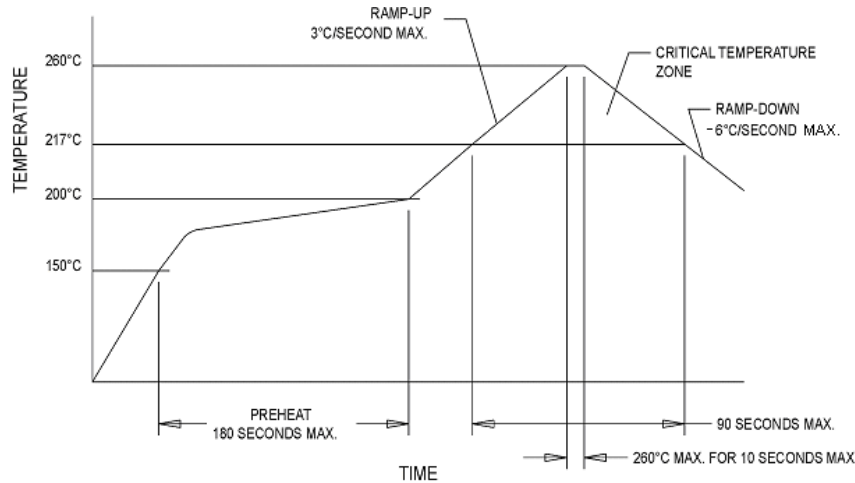
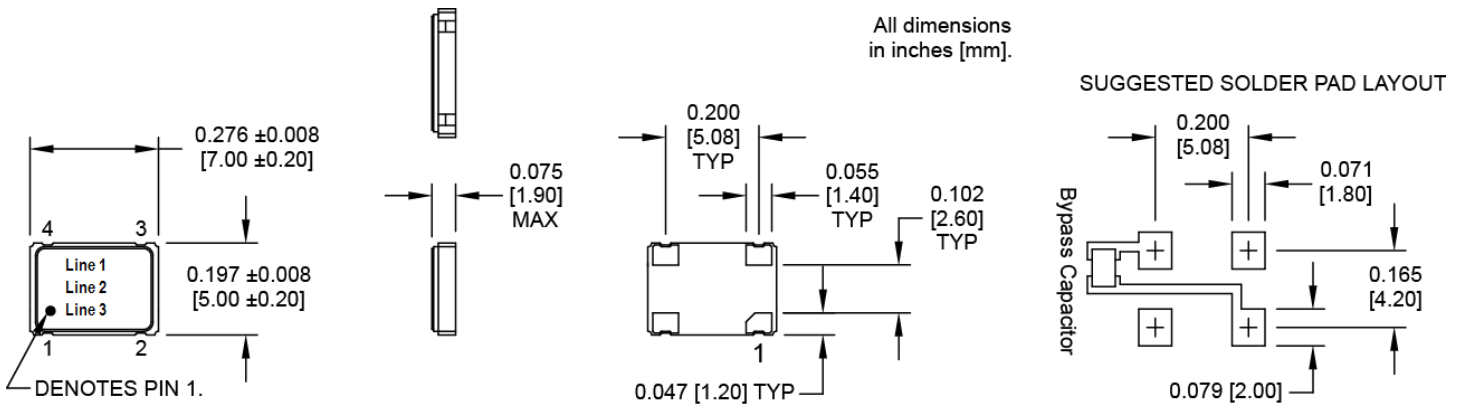


Figure 1

V. Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
8/4/04	0	WNJ	Original release.
3/31/10	A	WNJ	Added +260°C for 10 secs. max. reflow profile information.
11/13/14	B	MM	Added change notification control note & updated to new datasheet format.