

## SPECIFICATION FOR SMT OSCILLATOR

### MtronPTI P/N M2015S040

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>O</sub>		1.000000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-100		+100	ppm	
RF Output						
Output Type		HCMOS				
Output Load				50	pF	
Symmetry (duty cycle)	T <sub>DC</sub>	40	50	60	%	Ref to ½ V <sub>DD</sub>
Logic “1” Level	V <sub>OH</sub>	90% V <sub>DD</sub>			V	HCMOS load
Logic “0” Level	V <sub>OL</sub>			10% V <sub>DD</sub>	V	HCMOS load
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			7	nS	10% to 90% V <sub>DD</sub> HCMOS load
Tri-state Function		Logic “1” or floating Logic “0”				Lead1: Output Enabled Lead1: Disables Output to Hi-Z
Supply Voltage & Power Consumption						
Operating Voltage	V <sub>DD</sub>	4.5	5.0	5.5	V	
Operating Current	I <sub>DD</sub>			20	mA	
Other Specifications						
Jitter (Cycle-to-Cycle)				20	ps	RMS

#### Environmental & Mechanical Requirements:

Operating Temperature	T <sub>A</sub>	-55		+125	°C	
Storage Temperature	T <sub>S</sub>	-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 <sup>-8</sup> atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	4 J-lead ceramic. Sn-Pb solder dipped leads.					
Screening	HiRel Screening required per Hamilton Product Specs.					

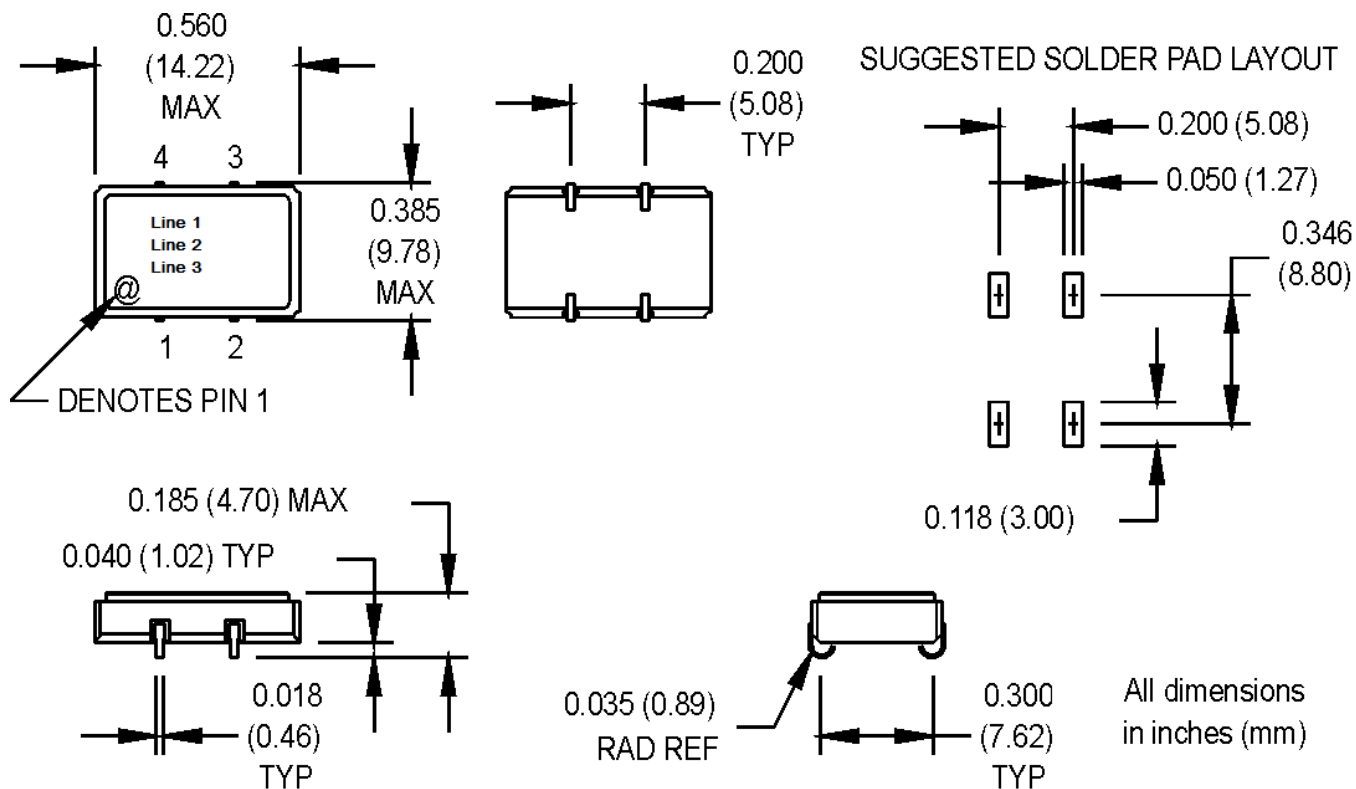
## SPECIFICATION FOR SMT OSCILLATOR MtronPTI P/N M2015S040

### Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Tri-state
2	Ground / Cover
3	Output
4	+V <sub>DD</sub>

Part Marking	
Line 1	M2015S040
Line 2	1.0000000M
Line 3	M-TRON yy ww

Legend	
yy	Year
ww	Work week



## SPECIFICATION FOR SMT OSCILLATOR MtronPTI P/N M2015S040

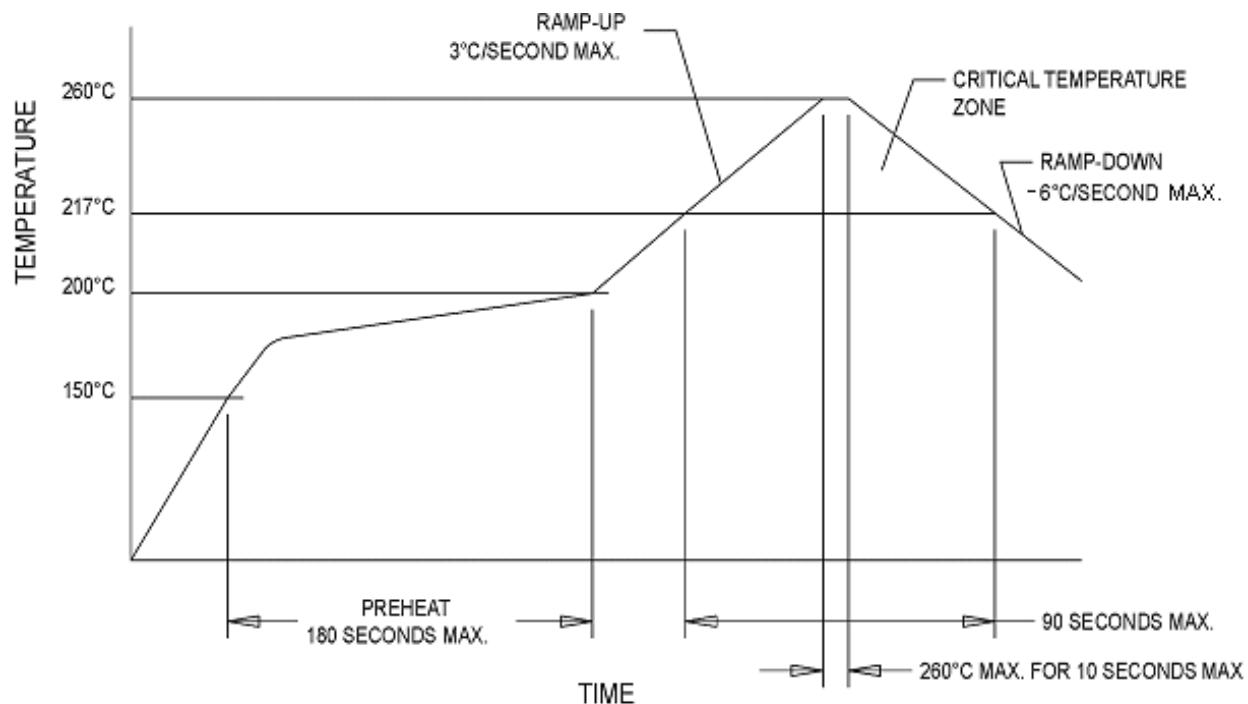


Figure 1

### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
01/13/05	0	WNJ	Product Part Number changed to track product improvement. Product part number previously was 1517-006
01-13-05	A	WNJ	PCN 10065: Drop In Substrate mounting in the Ceramic package changed to a "sandwich" design to improve CTE issues in product testing and use in HiRel environments. Manual dispensing of epoxy changed to an automated process
02-18-08	B	WNJ	Datasheet updated to reflect Hamilton Specification update to Revision P – Rise and Fall time changed to 7ns from 10
09/14/17	C	MM	Datasheet format update