



## SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT OSCILLATOR

### MtronPTI Part Number: M2002S425

#### I. General & Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>o</sub>		100.000000		MHz	
<b>Frequency Stability</b>						
Frequency Stability	ΔF/F	-50		+50	ppm	Includes initial tolerance and deviation over temperature
<b>RF Output</b>						
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T <sub>DC</sub>	40		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>			2	ns	10% to 90% V <sub>DD</sub>
Tristate Logic		Logic "1"			V	Pad 1: Output Enabled
		Logic "0"			V	Pad 1: Output Disabled to high-Z
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>DD</sub>	3.0	3.30	3.6	V	
Operating Current	I <sub>DD</sub>			20	mA	

#### II. Environmental & Mechanical Requirements:

Operating Temperature	T <sub>A</sub>	-55		+95	°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-pad 5 X 7 X 1.7 mm leadless ceramic.					
Pad Terminations	Tungsten base metal with 50 – 350 micro inches Followed by 11.8 – 39.4 micro inches gold					

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

Pad	Function
1	Tristate
2	Ground
3	Output
4	+V <sub>DD</sub>

Part Marking	
Line 1	M2002S425
Line 2	100M0000
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code

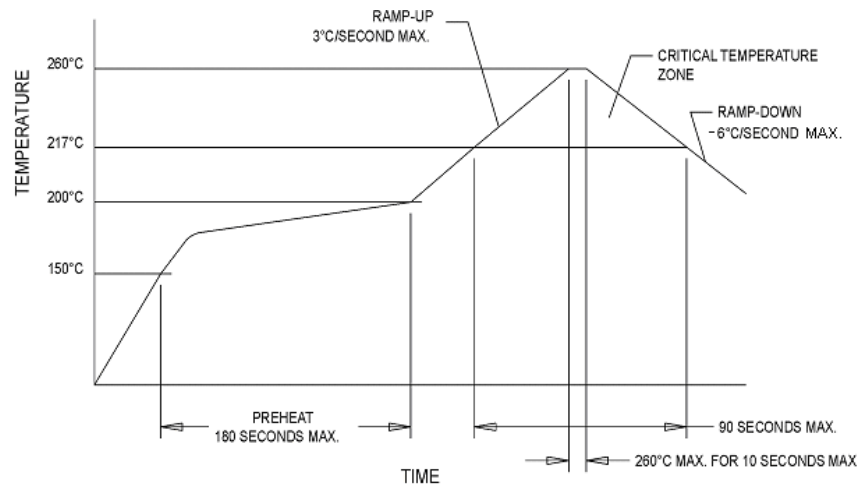
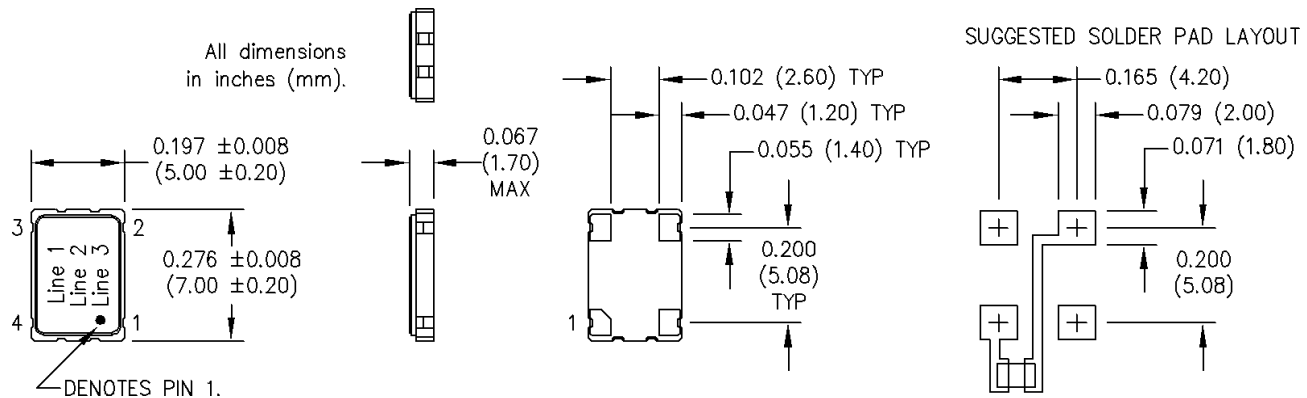


Figure 1

### IV. Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
6/15/05	0	WNJ	Original release.
5/31/07	A	WNJ	Added Random Jitter specs. Supersedes 6/15/05 release.
5/5/09	B	WNJ	Changed L-3 part number. Updated Maximum Soldering Conditions & pad material information.
10/09/17	C	MM	Updated supply current and datasheet format.