

SPECIFICATION FOR HCMOS COMPATIBLE SMT OSCILLATOR MtronPTI P/N M2002S989

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		156.250000		MHz	
Frequency Stability	ΔF/F	-50		+50	ppm	
Operating Temperature	T _A	-5		+85	°C	
Aging		-3		+3	ppm	1 st year
		-2		+2	ppm	Thereafter (per year)
Operating Voltage	V _{DD}	3.135	3.3	3.465	V	
Operating Current	I _{DD}			55	mA	
Output Type		HCMOS/TTL Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	45		55	%	Ref to ½ V _{DD} & 1.4 V
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
Output Current				±4	mA	
Rise/Fall Time	T _R /T _F			4	nS	From 10% to 90% V _{DD}
Phase Jitter (RMS)				1	pS	12 kHz to 20 MHz
Start-up Time	T _{SU}			10	ms	
Tri-state Enable Logic		80% V _{DD} or N/C			V	Pad 1. Clock Signal Output
Tri-state Disable Logic				20% V _{DD}	V	Pad 1. Output to high-Z

Environmental & Mechanical Requirements:

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)
Storage Temperature	-55°C to +125°C
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. (M2-Type)

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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Tri-state
2	Ground
3	Output
4	+V _{DD}

Part Marking	
Line 1	M2002S989
Line 2	156M2500
Line 3	M yywwvv

Legend	
yy	Year
ww	Work week
vv	Factory Code

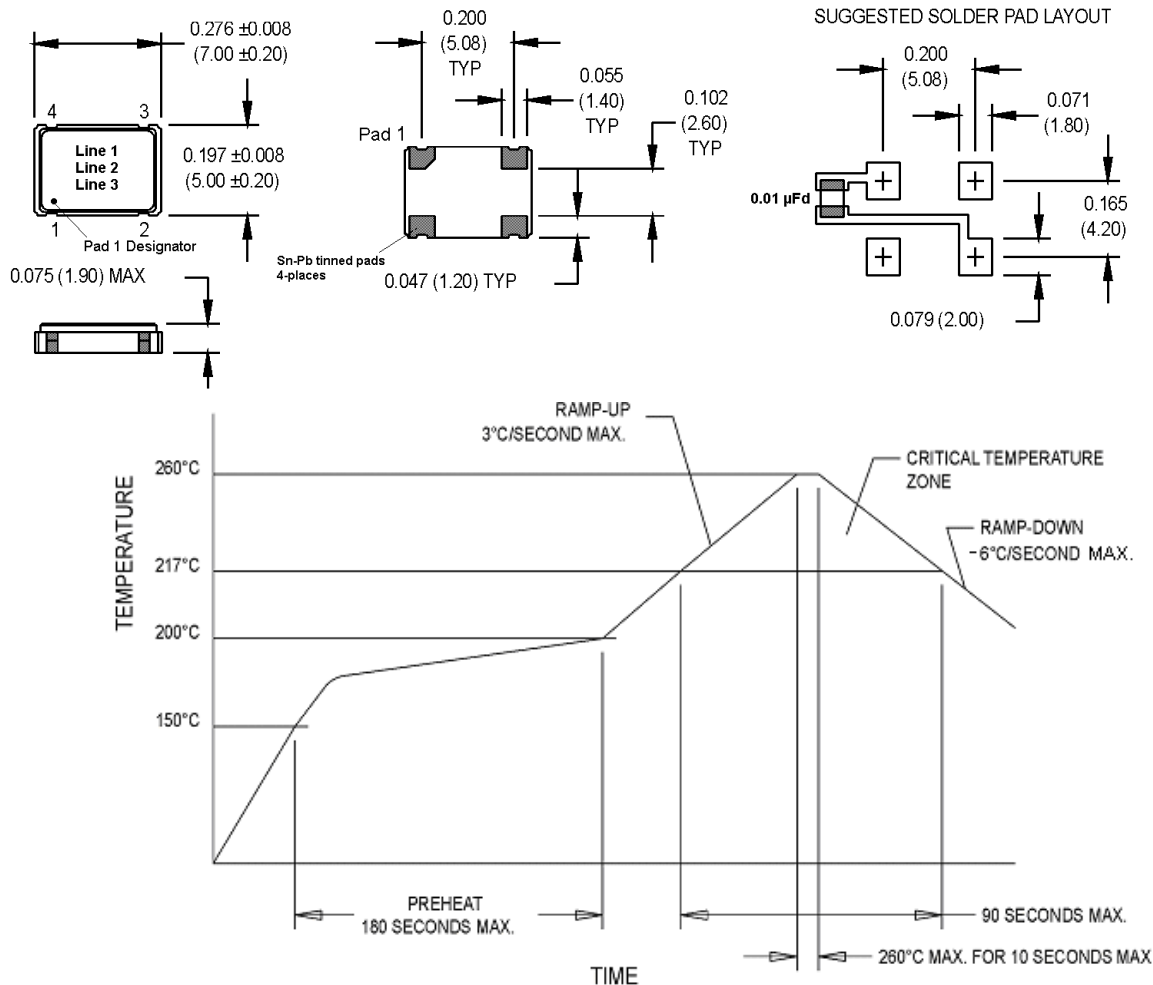


Figure 1

DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
1/26/12	0	MM	Original release.