

SPECIFICATION FOR HCMOS SMT OSCILLATOR MtronPTI P/N: M2001S037

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		50.000000		MHz	
Frequency Stability	ΔF/F	-100		+100	ppm	
Operating Temperature	T _A	-55		+125	°C	
Storage Temperature	T _S	-55		+125	°C	
Operating Voltage	V _{DD}	3.0	3.3	3.6	V	
Aging		-3		+3	ppm	1 st year
		-2		+2	ppm	Thereafter (per year)
Operating Current	I _{DD}			20	mA	
Output Type		HCMOS/TTL Compatible				
Output Load				15/2	pF/TTL	
Symmetry (duty cycle)	T _{DC}	40		60	%	Ref to ½ V _{DD}
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load
	V _{OH}	V _{DD} - 0.5			V	TTL Load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
	V _{OL}			0.5	V	TTL Load
Rise/Fall Time	T _R /T _F			6	nS	From 10% to 90% V _{DD}
Random Jitter	R _J		4	10	pS RMS	1-Sigma
Start-up Time	T _{SU}			10	mS	
Tri-state Function		Logic "1" enables output. Logic "0" disables output to a Hi-Z.				Pad1

Environmental & Mechanical Requirements:

Mechanical Shock	Per JESD22-B-104-A 1500g Peak 0.5 msec duration 5 pulses in 6 directions
Vibration	Per JESD22-B-103-A 20g Peak (20-2000 Hz) in X, Y and Z directions
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)
Fine Leak Test	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm cc/s of Helium)
Gross Leak Test	Per MIL-STD-202, Method 112 (30 second immersion)
ESD-Human Body Model	2000 volts; Per JESD22A-114-A
ESD-Machine Model	200 volts; Per JESD22A-115-A
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	6-pad 5 X 7 mm leadless ceramic.
Highly Accelerated Stress Testing (HASS)	Vibration over the temperature of -55°C to 105°C: To be performed by the customer.

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Mechanical, Marking and Layout Information:

Pad	Function
1	Tri-state
2	N/C
3	Ground
4	Output
5	N/C
6	+Vcc

Part Marking	
Line 1	M2001S037
Line 2	50M0000
Line 3	M yy ww

Legend	
yy	Year
ww	Work week

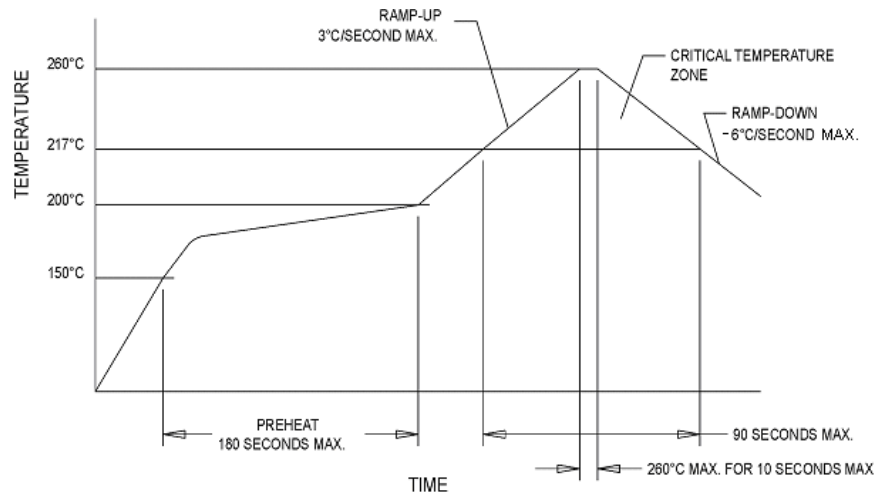
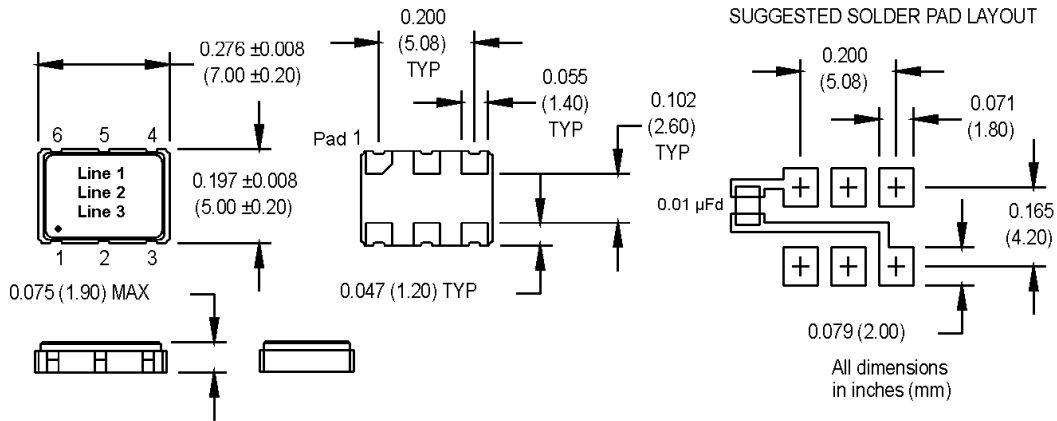


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
10/21/11	0	MM	Original release.
2/22/12	A	MM	Updated customer part number