

SPECIFICATION FOR HCMOS COMPATIBLE SMT OSCILLATOR MtronPTI P/N M2532S097

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions	
Frequency of Operation	F _O		25.000000		MHz		
Frequency Stability	ΔF/F	-50		+50	ppm	Includes calibration @ +25 °C, deviation over operating temperature range, shock, vibration, supply voltage and 1st year aging.	
Operating Temperature	T _A	-40		+95	°C		
Storage Temperature	T _S	-55		+125	°C		
Operating Voltage	V _{DD}	3.135	3.3	3.465	V		
Operating Current	I _{DD}			20	mA		
Output Type		HCMOS Compatible					
Output Load				15	pF		
Symmetry (duty cycle)	t _{DC}	45		55	%	Ref to ½ V _{DD}	
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load	
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load	
Rise/Fall Time	t _R /t _F			10	ns	From 10% to 90% V _{DD}	
Startup Time	t _{SU}		4	10	ms		
Tristate Function		Logic "1" or floating Logic "0"					Pad 1: Enables output. Pad 1: Disables output to a high impedance.
Random Jitter			4	10	ps RMS	1 Sigma	

Environmental & Mechanical Requirements:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g, 6 ms duration, ½ sine wave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g from 10 Hz to 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)
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	4-pad 2.5 X 3.2 X 1.1 mm leadless ceramic. RoHS compliant. (M2532 Type)

Screening:

All devices shall receive 100% testing for frequency vs. temperature over the specified operating temperature range. All devices must pass these requirements before they are assigned the Honeywell part number. Testing shall be conducted at -40 °C and +95 °C (a 3 °C margin minimum shall be added to hot and cold temperature tests).

Electrical Test:

All devices shall receive 100% electrical test at room temperature, for frequency, supply current, waveform symmetry, logic levels, and rise/fall time. If yield loss is greater than 5%, for any 20 piece set of devices, testing shall be stopped and Honeywell shall be notified immediately.

Marking:

All devices passing the requirements above shall be marked with a dot of white paint.

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Dimensions, Marking, and Pin Out Information:

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

Part Marking	
Line 1	25M000
Line 2	M ymv

Legend	
y	Last digit of year
m	Letter code for month
v	Factory code

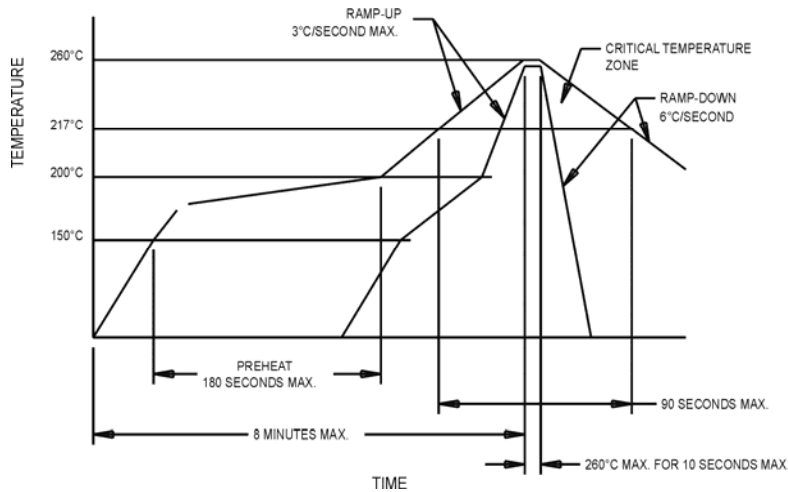
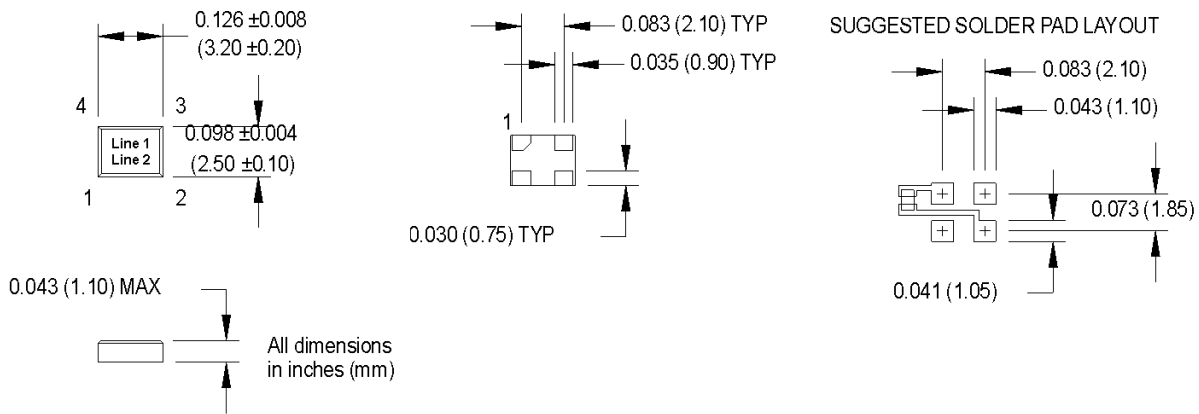


Figure 1

Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
11/11/13	B	DCO	Corrections to test parameters, marking, and screening mark.
09/23/13	A	LEO	Added Screening, Electrical Test, and Marking sections and minor layout edits.
3/25/13	0	MM	Original release.