



1703 E. Highway 50 Yankton, SD 57078 USA
 Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
 Website: www.mtronpti.com

PRELIMINARY SPECIFICATION FOR HCMOS SMT OSCILLATOR
MtronPTI P/N: M2001S041

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		50.000000		MHz	
Frequency Stability						
Frequency Stability	$\Delta F/F$	-50		+50	ppm	
Aging		-3		+3	ppm	1 st year
		-2		+2	ppm	Thereafter (per year)
RF Output						
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				TTL Load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
	V _{OL}			0.5		TTL Load
Rise/Fall Time	T _R /T _F			6	nS	From 10% to 90% V _{DD}
Start-up Time	T _{SU}			10	mS	
Tri-state Function		Logic "1" enables output. Logic "0" disables output to a Hi-Z.				Pad1
Supply Voltage & Current						
Operating Voltage	V _{DD}	3.0	3.3	3.6	V	
Operating Current	I _{DD}			20	mA	
Additional Specifications						
Random Jitter	RJ		4	10	pS RMS	1-Sigma

Environmental & Mechanical Requirements:

Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Mechanical Shock	Per JESD22-B-104-A 5000g 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. Sn63Pb37 solder tinned pads.					

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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	M2001S041
Line 2	50M0000
Line 3	M yy ww

Legend	
yy	Year
ww	Work week

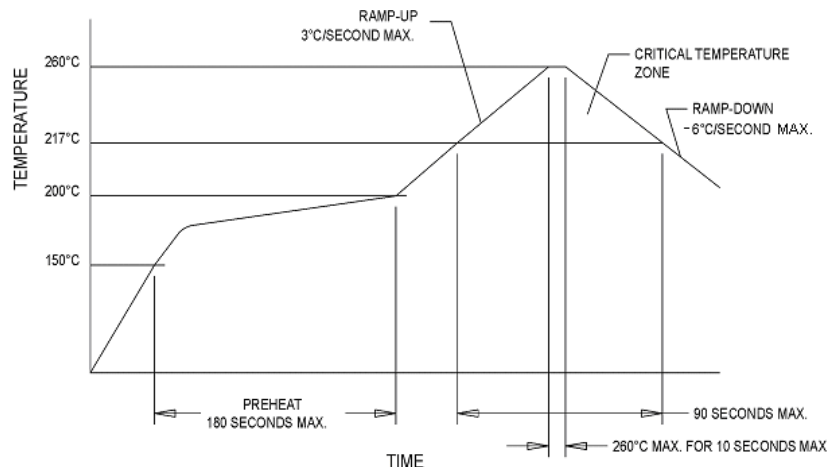
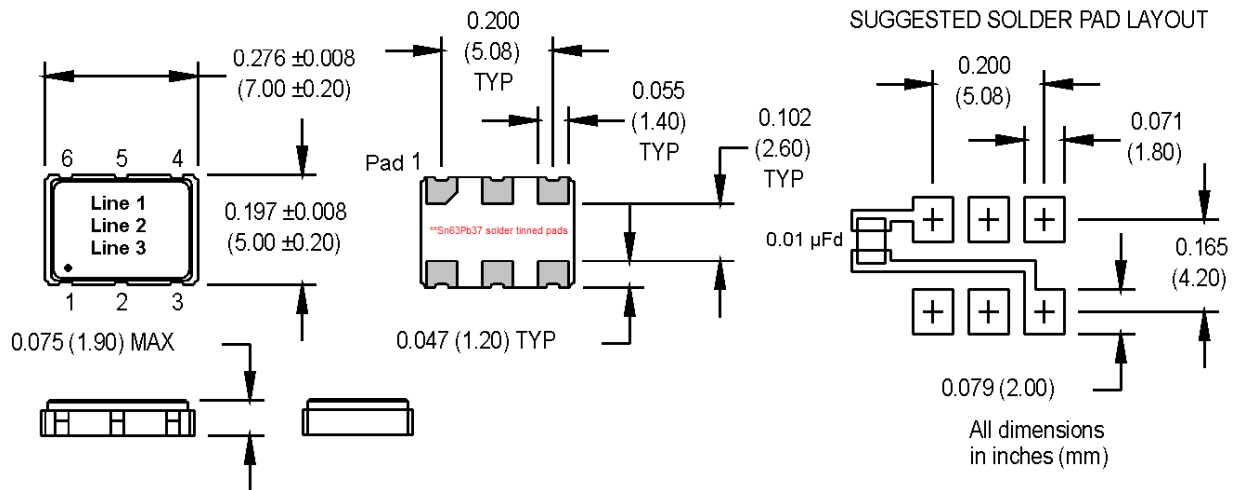


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
05-17-16	0	DPD	Original release.
11/10/17	A	MM	Change to SnPb tinned pads & datasheet format update