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

SPECIFICATION FOR SMT LVDS OSCILLATOR
MtronPTI P/N M2100S125

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		100.000000		MHz	
Initial Tolerance		-5		+5	ppm	@ +25°C
Frequency Stability						
vs. Temperature	$\Delta F/F$	-5		+5	ppm	
Overall Stability		-30		+30	ppm	Inclusive of initial tolerance, deviation over temperature, voltage & load variations, and 5 year aging.
RF Output						
Output Type		Differential LVDS Compatible				
Output Load		100 Ω Differential			V	
Common Mode Output Voltage			1.2		V	
Differential Output Voltage		350		500	mV	LVDS Load
Symmetry (duty cycle)	T_{DC}	45		55	%	@ 50% of waveform
Rise/Fall Time	T_R/T_F			0.5	nS	From 20% to 80% V_{CC}
Tristate Enable Logic		80% V_{DD} or N/C			V	Pad 1: Output Enabled
Tristate Disable Logic				0.5	V	Pad 1: Output to high-Z
Start-up Time	T_{SU}			10	mS	
SSB Phase Noise & Jitter						
Phase Noise				-125	dBc/Hz	@ 10kHz Offset
				-130		@ 100kHz Offset
				-135		@ 1MHz Offset
				-140		@ 10MHz Offset
				-140		@ 20MHz Offset
Phase Jitter	Φ_J			2.0	pS RMS	Integrated 10 kHz to 20 MHz
Random Jitter	R_J			15	pS RMS	1-Sigma
Supply Voltage & Power Consumption						
Operating Voltage	V_{CC}	3.135	3.3	3.465	V	
Operating Current	I_{CC}		80	100	mA	

Environmental Conditions:

Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	T_S	-55		+125	°C	
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^{-8} atm cc/s of helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See Figure 1.					
Package Type	6-pad 5.0 X 7.0 X 1.9 mm leadless ceramic. Solder tinned pads (SnPb)..					

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Mechanical, Marking, and Pin Out Information:

Part Marking	
Line 1	M2100S125
Line 2	100M0000
Line 3	MPTI yyww

Legend	
yy	Year
ww	Work week

Pin	Function
1	Enable/Disable
2	N/C
3	Ground
4	Output
5	Complementary Output
6	$+V_{CC}$

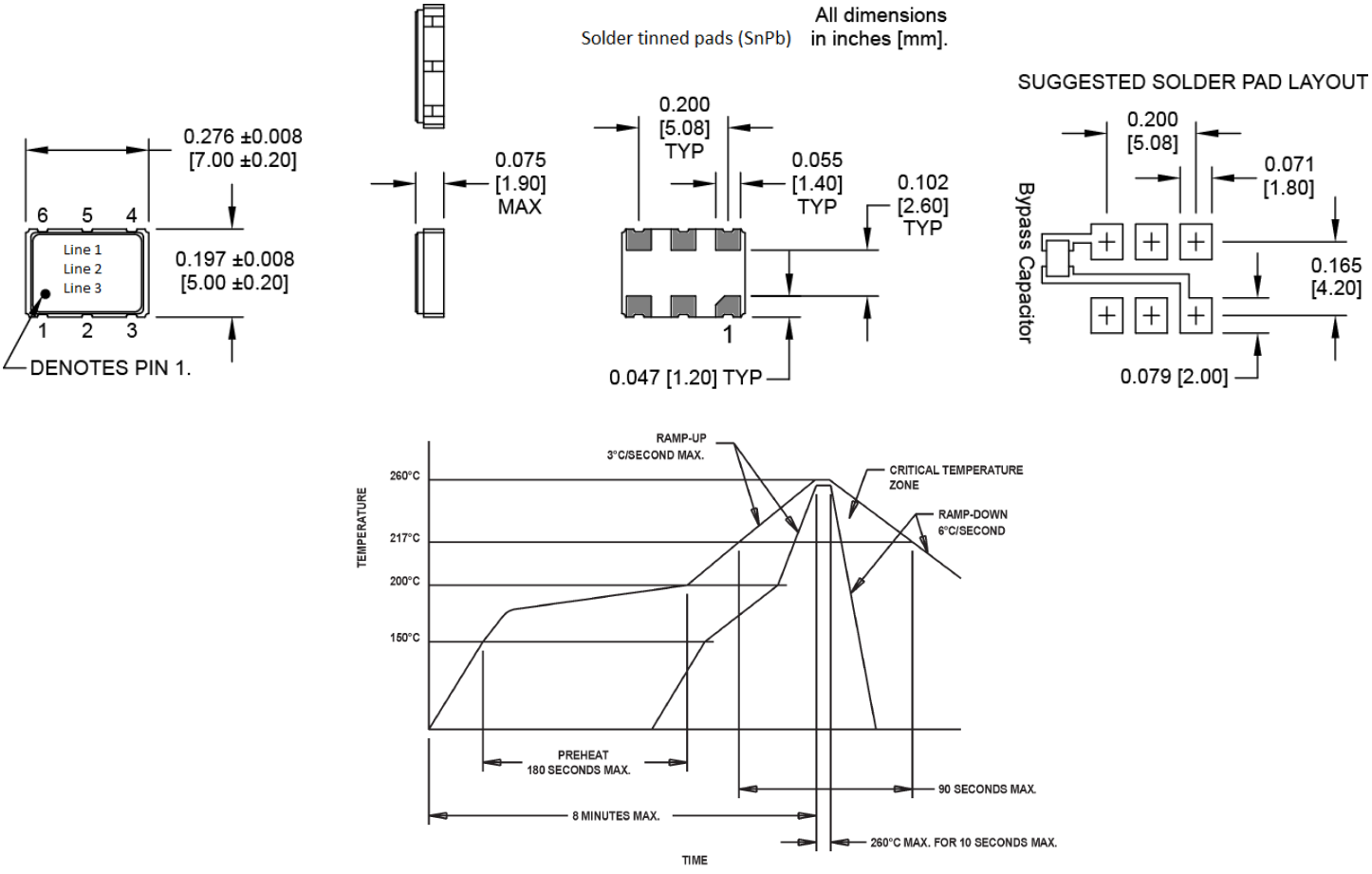

Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
02/02/16	0	MM	Original release.