



## SPECIFICATION FOR LVPECL SMT OSCILLATOR

### MtronPTI P/N: M2060S010

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>o</sub>		125.000000		MHz	
<b>Frequency Stability</b>						
Frequency Stability	ΔF/F	-50		+50	ppm	Includes calibration at +25°C, deviation over operating temperature range, deviation over supply voltage, and 20 years aging.
<b>RF Output</b>						
Output Type		Complementary LVPECL				
Output Load		50 Ω to V <sub>DD</sub> - 2 V or equivalent				
Symmetry (duty cycle)	T <sub>DC</sub>	45	50	55	%	Ref. to 50% of waveform
Logic "1" Level	V <sub>OH</sub>	V <sub>CC</sub> - 1.02			V	LVPECL load
Logic "0" Level	V <sub>OL</sub>			V <sub>CC</sub> - 1.63	V	LVPECL load
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			1	nS	@ 20 / 80% LVPECL
Start-up Time	T <sub>SU</sub>			10	mS	T <sub>amb</sub> = +25°C
Enable Logic		70% V <sub>CC</sub> or N/C			V	Pad 1: Output Enabled
Disable Logic				30% V <sub>CC</sub>	V	Pad 1: Output to high-Z
<b>Supply Voltage &amp; Power Consumption</b>						
Operating Voltage	V <sub>DD</sub>	2.375	2.5	2.625	V	
Operating Current	I <sub>CC</sub>			80	mA	
<b>Additional Specifications</b>						
SSB Phase Noise				-60	dBc/Hz	@ 100Hz Offset
				-90		@ 1kHz Offset
				-110		@ 10kHz Offset
				-125		@ 100kHz Offset
				-140		@ 1MHz Offset
Phase Jitter	Φ <sub>J</sub>			1.0	pS RMS	Integrated 12 kHz to 20 MHz
Period Jitter				40	pS Pk-Pk	Histogram of 50,000 cycles

#### Environmental & Packaging Requirements:

Operating Temperature	T <sub>A</sub>	-40		+85	°C	
Storage Temperature	T <sub>S</sub>	-55		+125	°C	
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 <sup>-8</sup> atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					



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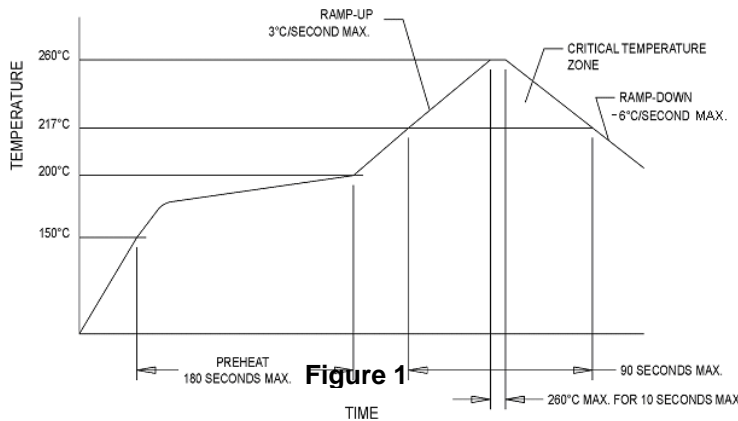
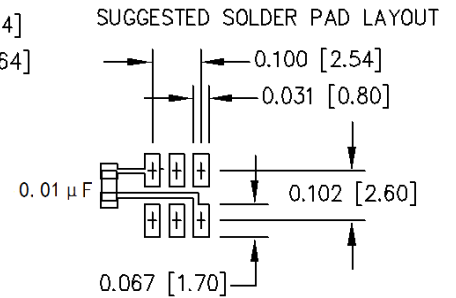
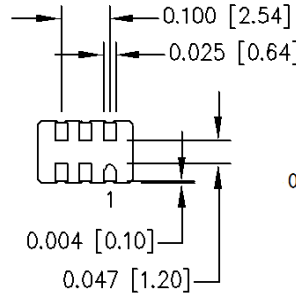
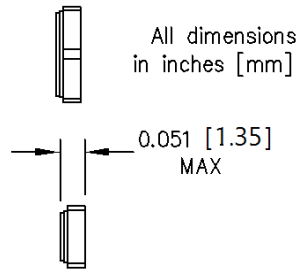
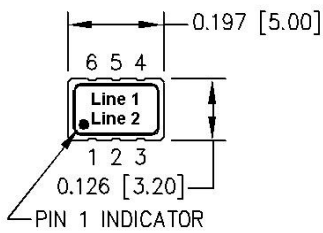
Package Type	6-pad leadless ceramic 3.2 X 5.0 mm. RoHS compliant.
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**Dimensions, Marking, Pin Out:**

Pad	Function
1	Enable/Disable
2	N/C
3	Ground
4	Output
5	Complimentary Output
6	+V <sub>CC</sub>

Part Marking	
Line 1	125M000
Line 2	M yy ww vv

Legend	
yy	Year
ww	Work Week
vv	Factory code



**Datasheet Revision Table:**

Date	Rev.	Author	Details of Revision
11/20/13	0	MM	Original release.