

SPECIFICATION FOR RoHS 6 COMPLIANT LVPECL OUTPUT SMT TCXO

MtronPTI P/N M6301S009

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		40.000000		MHz	
Frequency Stability	ΔF/F	-20		+20	ppm	Includes calibration tolerance @ 25°C, power supply variation, load changes, reflow drift, temperature, aging 15 years, shock and vibration
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Operating Voltage	V _{CC}	2.375	2.5	2.625	V	
Operating Current	I _{CC}			120	mA	
Output Type		Complementary LVPECL Compatible				
Output Load		50 Ω to (V _{CC} – 2)			V _{DC}	
Logic “1” Level Output	V _{OH}	V _{CC} – 1.025			V	
Logic “0” Level Output	V _{OL}			V _{CC} – 1.62	V	
Symmetry (Duty Cycle)	T _{DC}	45		55	%	Ref. at 50% of waveform
Output Skew			20		pS	
Rise/Fall Time	T _R /T _F			0.35	nS	From 20% to 80% V _{CC}
Enable Function (Pad 1)		80% V _{CC} or open			V	Output enabled
Disable Function (Pad 1)				0.5	V	Output disabled to a high-Z
Start-up Time	T _{SU}			10	mS	
Phase Jitter	Φ _J		0.5	1.0	pS RMS	Integrated 12kHz to 20MHz
Period Jitter	P _J		2		pS RMS	1000 Cycles
			14		pk-pk	1000 Cycles

Environmental Conditions:

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 Shock	Per MIL-STD-883, Method 1011, Condition A
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B
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. RoHS compliant.

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Mechanical, Marking, and Pin Out Information:

Part Marking	
Line 1	M6301S009
Line 2	40M0000
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}

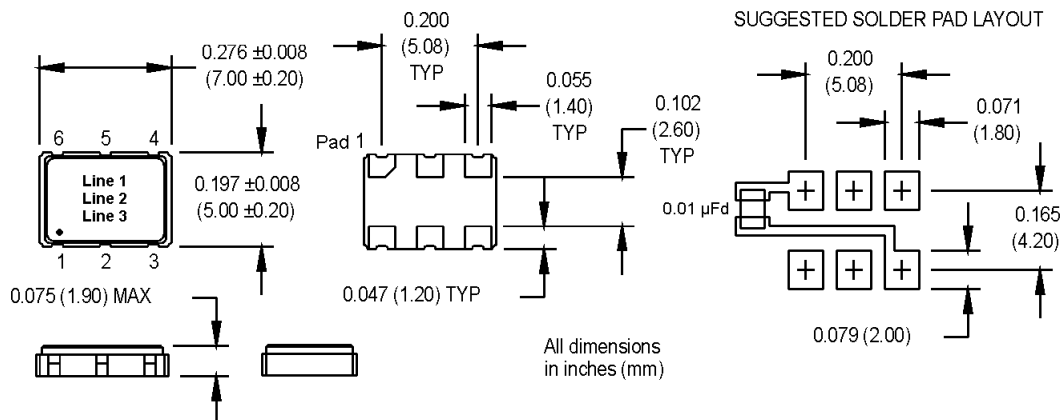
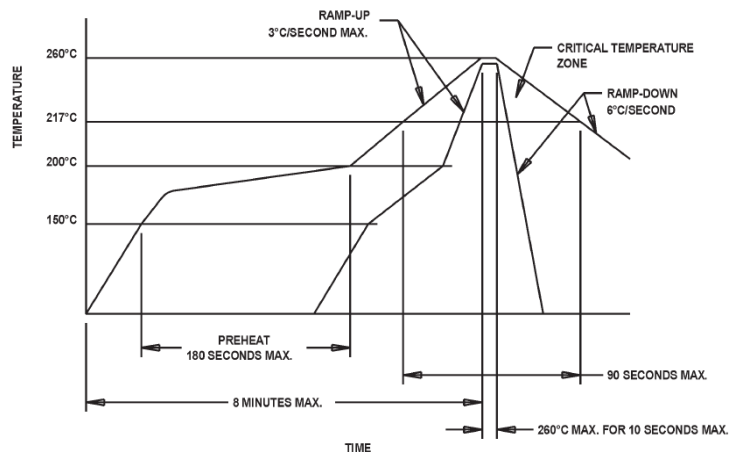


Figure 1



Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
2/23/12	0	MM	Original release.