

SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS OUTPUT SMT TCXO

MtronPTI P/N M6300S060

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		100.000000		MHz	
Frequency Stability						
Frequency Tolerance		-1.0		+1.0	ppm	@ +25°C
Frequency Stability	ΔF/F	-2.0		+2.0	ppm	Over operating temperature (F _{Max} – F _{Min})/2
Aging		-3.0		+3.0	ppm	1 st year
		-1.0		+1.0	ppm	Per year thereafter
Output						
Type		HCMOS Compatible				
Load		15			pF	
Symmetry (duty cycle)	T _{DC}	45		55	%	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			6	ns	From 20% to 80% V _{DD}
Start-up Time	T _{SU}			10	ms	
SSB Phase Noise						
Phase Noise			-70		dBc/Hz	@ 10 Hz
			-104		dBc/Hz	@ 100 Hz
			-123		dBc/Hz	@ 1 kHz
			-130		dBc/Hz	@ 10 kHz
			-135		dBc/Hz	@ 100 kHz
Supply						
Operating Voltage	V _{DD}	3.135	3.3	3.465	V	
Operating Current	I _{DD}			90	mA	
Temperature Range						
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	

Environmental Conditions:

Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sine wave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10 Hz - 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 mm x 7.0 mm x 1.9 mm leadless ceramic. RoHS compliant.

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Mechanical, Marking, and Pin Out Information:

Pin	Function
1	N/C
2	N/C
3	Ground
4	Output
5	N/C
6	+V _{CC}

Part Marking	
Line 1	M6300S060
Line 2	100M000
Line 3	MPTI yyww

Legend	
yy	Year
ww	Work week

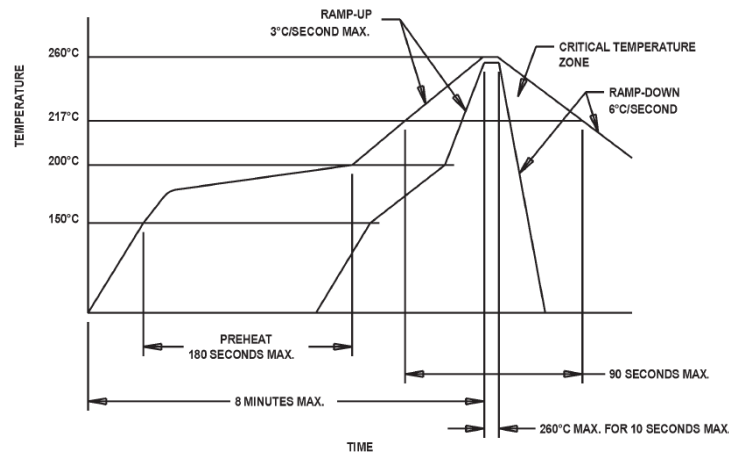
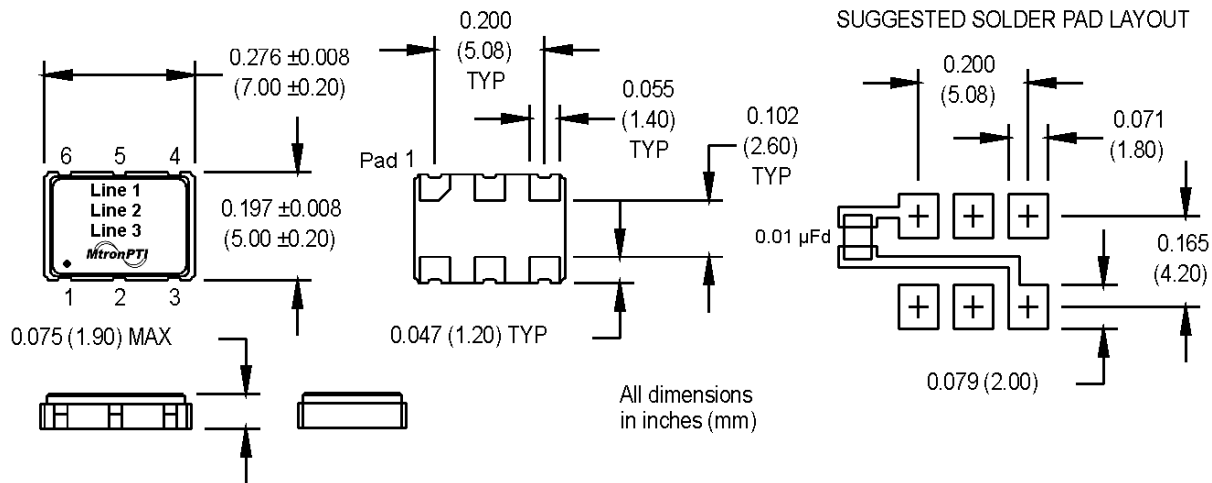


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
10/16/12	0	MM	Original release.
11/05/12	A	LEO	Minor layout updates, and added Qik Chip designation to part drawing.