

SPECIFICATION FOR RoHS 6 COMPLIANT SMT CRYSTAL MtronPTI M1253S107

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Mode of Oscillation		Fundamental (AT-Cut)				
Frequency	F ₀		52.000000		MHz	
Frequency Tolerance	F/F	-10		+10	ppm	@ 25°C
Frequency Stability	ΔF/F	-15		+15	ppm	Over operating temperature range
Operating Temperature	T _A	-20		+70	°C	
Storage Temperature	T _S	-40		+85	°C	
Aging		-3.0		+3.0	ppm	1 st year @ 25°C ±2°C
		-1.0		+1.0	ppm	Thereafter @ 25°C ±2°C
Load Capacitance	C _L		20		pF	
Shunt Capacitance	C ₀	0.9		1.5	pF	
Motional Capacitance	C _m			4.6	fF	
Motional Inductance	L _m	2.1		4.0	mH	
Tuning Sensitivity				5.5	ppm/pF	
ESR				50	Ω	
Drive Level	D _L	10	50	100	μW	

Environmental Conditions:

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)
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 solder profile, Figure 1
Package	4-pad 2.5 x 3.2 x 0.8 mm leadless. RoHS compliant.

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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Input / Output
2	Cover / Ground
3	Input / Output
4	Cover / Ground

Part Marking	
Line 1	52M000
Line 2	M B y ww v

Line 2 Legend	
M	MtronPTI
B	Part Series
y	Year
ww	Work Week No.
v	Factory code

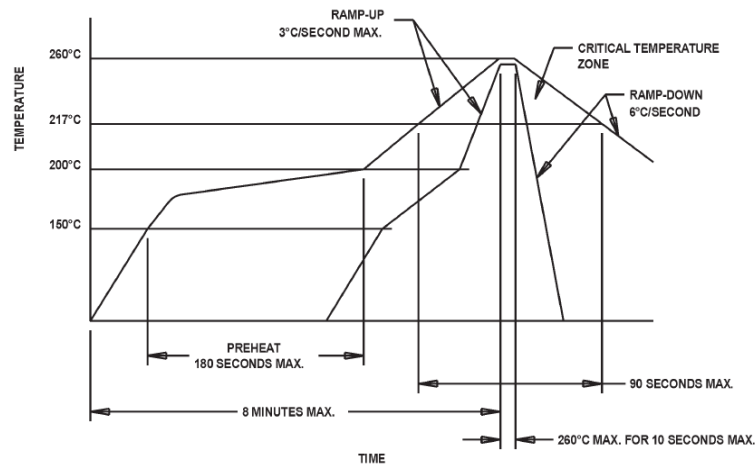
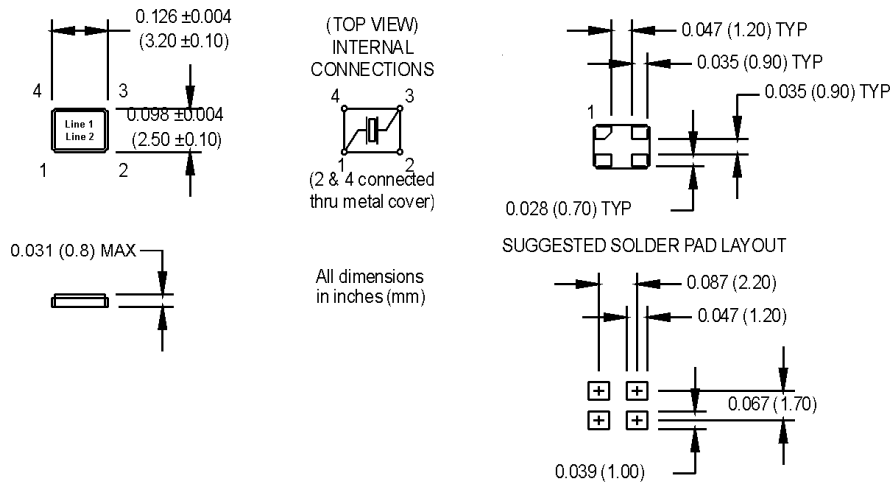


Figure 1

DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
05/15/11	0	TOY	Original release.
12/12/11	A	CH	Changed minimum Shunt capacitance value to 0.9pF
08/06/14	B	MM	Updated motional capacitance and tuning sensitivity specifications.