

**SPECIFICATION FOR STRATUM IV COMPLIANT
HCMOS/TTL OUTPUT COMPATIBLE SMT OSCILLATOR
MtronPTI P/N M2002S944**

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		5.120000		MHz	
Frequency Stability	ΔF/F	-32		+32	ppm	Includes initial tolerance at time of shipment, deviation over operating temperature, changes in supply voltage, and load, and 20 year aging at an average operating temperature of +40°.
Operating Temperature	T _A	-20		+70	°C	
Storage Temperature	T _S	-55		+125	°C	
Aging		-5		+5	ppm	Per year
Operating Voltage	V _{DD}	2.97	3.3	3.63	V	
Operating Current	I _{DD}		7	12	mA	V _{DD} = 3.3 V
Output Type		HCMOS/TTL Compatible				
Output Load	C _L		15	50/10	pF/TTL	
Symmetry (Duty Cycle)	T _{DC}	45		55	%	Ref to ½ V _{DD}
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS Load
	V _{OH}	V _{DD} - 0.6			V	TTL Load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS Load
				0.4	V	TTL Load
Output Current Level	I _{OH}			-8	mA	V _{OH} = 2.2 V V _{DD} = 3.0 V
	I _{OL}			+8	mA	V _{OL} = 0.4 V V _{DD} = 3.0 V
Rise/Fall Time	T _R /T _F		6	8	ns	Ref. to 10% to 90%. C _L = 15 pF.
Phase Jitter (RMS)				2	ps	12 kHz to 20 MHz
Tri-State Function		Logic "1" enables output. Logic "0" disables output to a high-Z.				Pad 1
Tri-state Enable Time	T _{PLZ}			10	ms	
Start-Up Time	T _S			10	ms	

Environmental & Mechanical Requirements:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C
Vibration	Per MIL-STD-202, Methods 201 & 204
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 Type	4-pad 5.0 X 7.0 X 1.8 mm leadless ceramic. RoHS compliant.

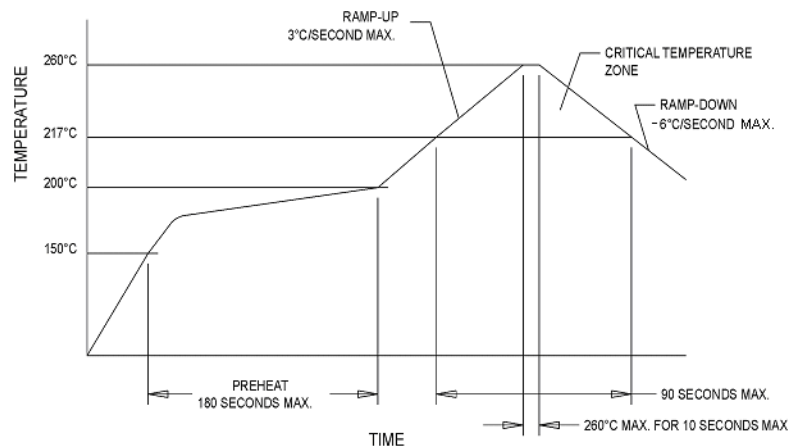
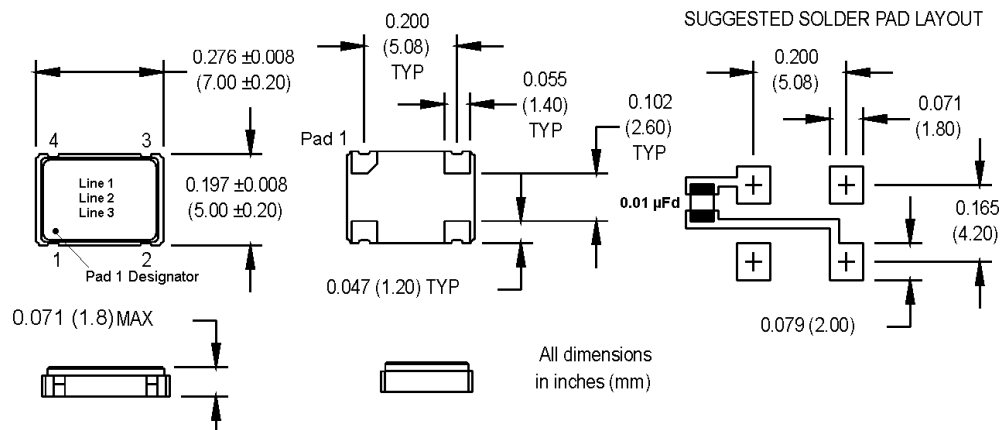
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Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Tri-state
2	Ground
3	Output
4	+V _{DD}

Part Marking	
Line 1	M2002S944
Line 2	5M1200
Line 3	M yywwvv

Legend	
yy	Year
ww	Work week
vv	Factory Code



DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
6/8/10	0	WNJ	Original release.
6/29/10	A	WNJ	Changed Phase Jitter value from 1 ps to 2 ps.