

SPECIFICATION FOR HCMOS COMPATIBLE SMT OSCILLATOR

MtronPTI P/N: M2005S095

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _O		125.000000		MHz	
Frequency Stability	ΔF/F	-100		+100	ppm	Includes initial tolerance, deviation over temperature, supply, load, shock, vibration, and 20 yrs. aging.
Operating Temperature	T _A	0		+70	°C	
Aging		-3		+3	ppm	1 st year
		-2		+2	ppm	Thereafter (per year)
Operating Voltage	V _{DD}	2.97	3.3	3.63	V	
Operating Current	I _{DD}			50	mA	
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	45		55	%	Ref to 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
Logic "1" Output Current	I _{OH}	-8			mA	
Logic "0" Output Current	I _{OL}			+8	mA	
Rise/Fall Time	T _R /T _F		1.5	3	ns	From 10% to 90% V _{DD}
Phase Jitter (RMS)				5	ps	10 Hz to 20 MHz
Phase Jitter (RMS)				1	ps	12 kHz to 20 MHz
Start-up Time	T _{SU}			10	ms	
Tri-state Enable Voltage		70% V _{DD}			V	Pin 1 (Output enabled)
Tri-state Disable Voltage				30% V _{DD}	V	Pin 1 (Output to a high impedance state)
Phase Noise			-60		dBc/Hz	@ 10 Hz offset
			-90		dBc/Hz	@ 100 Hz offset
			-125		dBc/Hz	@ 1 kHz offset
			-135		dBc/Hz	@ 10 kHz offset
			-140		dBc/Hz	@ 100 kHz offset

Environmental & Mechanical Requirements:

Shock	50 g's, 11 ms duration, ½ sinewave.
Vibration	10 g's from 10-500 Hz.
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)
Storage Temperature	-55°C to +125°C
Hermeticity	Per MIL-STD-883, Method 1014, Condition A1 & C1 (1 x 10 ⁻⁸ atm cc/s of Helium)
Solderability	Per MIL-STD-202, Method 208
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	9 X 14 mm 4-J lead ceramic. Gold flash leads. 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	M2005S095
Line 2	125.0000 M
Line 3	M yyww

Legend	
yy	Year
ww	Work week

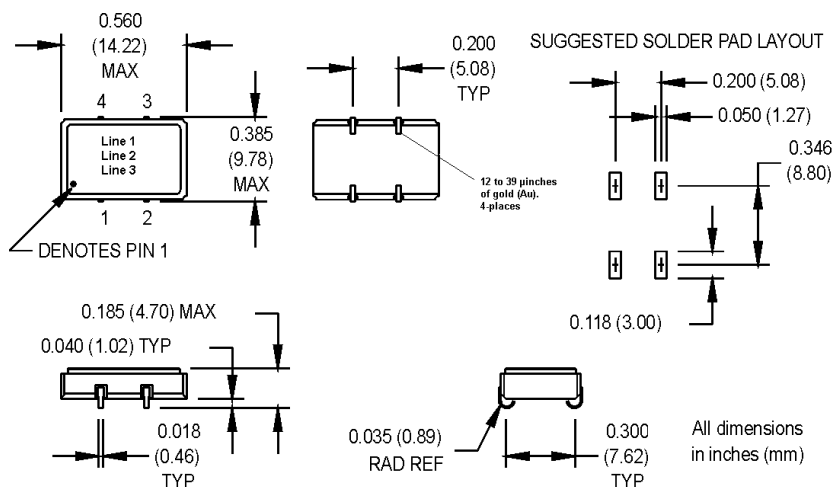
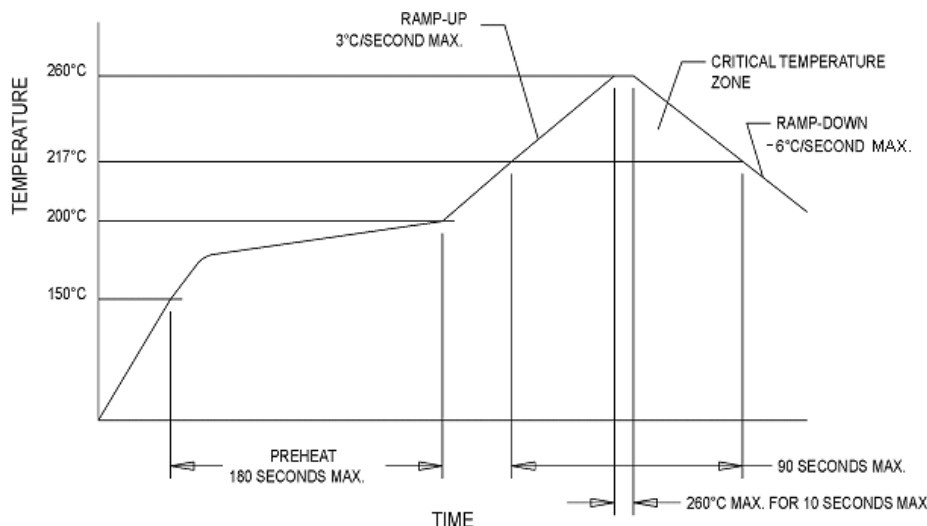


Figure 1



Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
3/10/11	0	WNJ	Original release.