

SPECIFICATION FOR SELECTABLE FREQUENCY OSCILLATOR

MtronPTI P/N: M2120S002

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency (1)	F ₁		622.080000		MHz	
Frequency (2)	F ₂		644.531300		MHz	
Frequency Stability	$\Delta F/F$	-20		+20	ppm	
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+120	°C	
Operating Voltage	V _{CC}	3.135	3.3	3.465	V	
Operating Current	I _{CC}			125	mA	
Output Type		Complementary LVPECL Compatible				
Output Load		50 Ω to (V _{CC} - 2)			V	
Symmetry (Duty Cycle)		45		55	%	Ref. to 50% of Waveform
Logic "1" Level	V _{OH}	V _{CC} - 1.02			V	
Logic "0" Level	V _{OL}			V _{CC} - 1.63	V	
Rise/Fall Time				350	ps	20% and 80%
Phase Jitter (1-Sigma)				4.0	ps RMS	12 kHz to 20 MHz
Phase Noise (250 MHz)			-84		dBc/Hz	@ 100 Hz
			-107		dBc/Hz	@ 1 kHz
			-116		dBc/Hz	@ 10 kHz
			-121		dBc/Hz	@ 100 kHz
			-134		dBc/Hz	@ 1 MHz
			-146		dBc/Hz	@ 10 MHz
Enable/Disable		Enable Outputs = Logic "0" Disable Outputs = Logic "1"				Pad 2
Frequency Select (FSO)		F ₁ = Logic "0" F ₂ = Logic "1"				Pad 1

Environmental & Mechanical Requirements:

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 Type	6-pad 5 X 7 mm leadless ceramic. RoHS compliant.

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Dimensions, Marking, and Pin Out Information:

Part Marking	
Line 1	M2120S002
Line 2	622/644M
Line 3	M yyww

Legend	
yy	Year
ww	Work week

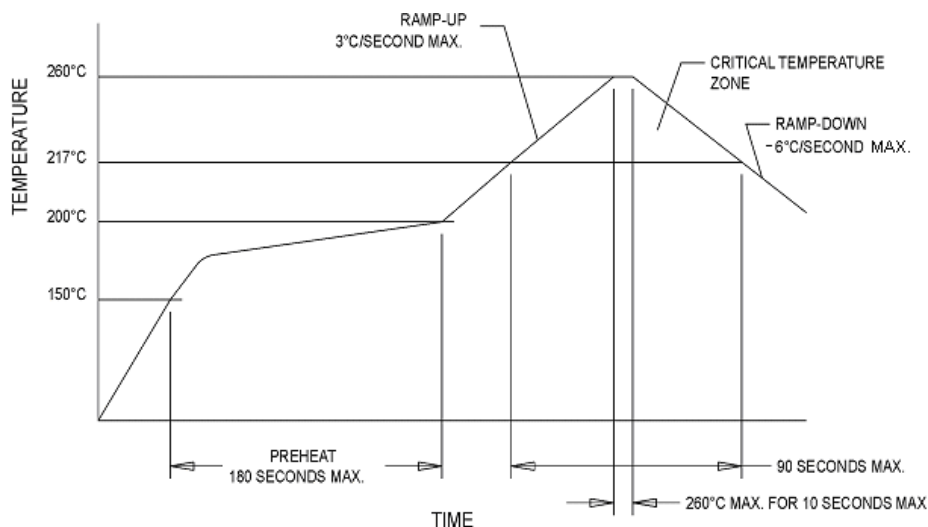
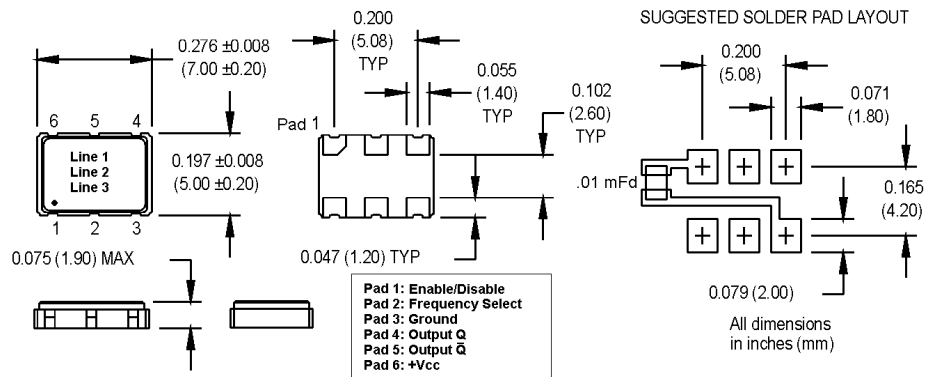


Figure 1

Datasheet Revision Table

Date	Rev.	Author	Details of Revision
08/30/07	0	N/A	Original release.
10/09/07	A	N/A	Changed 100 Hz Phase noise to -84 dBc/Hz from -97 dBc/Hz. Supercedes 8/30/07 release.
06/04/12	B	LEO	Updated layout. Removed space from Line 2 of laser marking.