

SPECIFICATION FOR SELECTABLE FOUR-FREQUENCY LVPECL SMT OSCILLATOR MtronPTI P/N: M2140S010

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency 1	F ₁		100.000000		MHz	
Frequency 2	F ₂		125.000000		MHz	
Frequency 3	F ₃		156.250000		MHz	
Frequency 4	F ₄		312.500000		MHz	
Frequency Stability		-20		+20	ppm	
Operating Temperature	T _A	-40		+85	°C	
Aging		-3		+3	ppm	1 st year
		-1		+1	ppm	Thereafter (per year)
Operating Voltage	V _{CC}	3.135	3.3	3.465	V	
Operating Current	I _{CC}			130	mA	
Output Type		LVPECL Compatible				
Output Load		50 Ω to (V _{CC} - 2) V				
Symmetry (duty cycle)	T _{DC}	45		55	%	Ref. to V _{DD} -1.3 V
Logic "0" Level	V _{OL}			V _{CC} - 1.63	V	
Logic "1" Level	V _{OH}	V _{CC} - 1.02			V	
Rise/Fall Time	T _R /T _F			0.35	nS	From 20% to 80% V _{DD}
Enable/Disable Function		Logic "1" enables outputs				Pad 1
		Logic "0" disables outputs				Pad 1
Start-up Time	T _{SU}			10	ms	

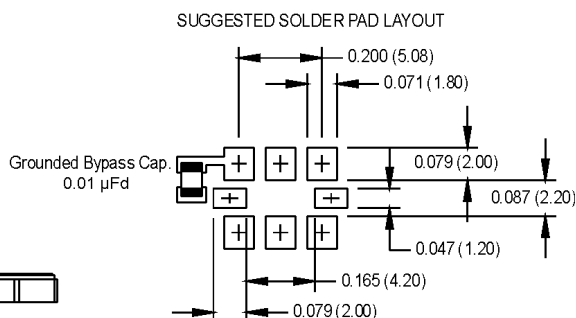
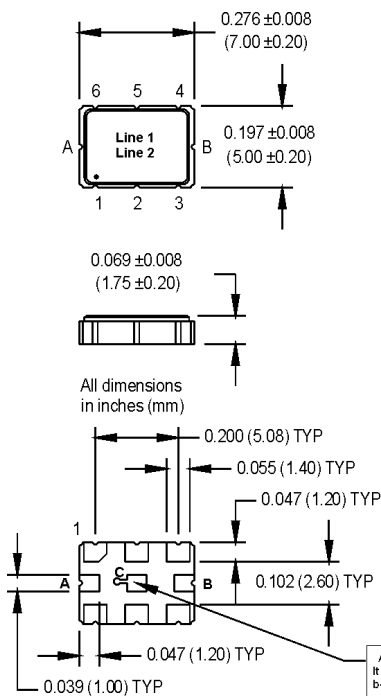
Environmental & Packaging Requirements:

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)
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-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	5 X 7 mm 9-pad leadless ceramic. RoHS compliant.

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Part Marking	
Line 1	M2140S010
Line 2	MPTI (yyww)

Legend	
yy	Year
ww	Work week



Pad 1: Enable/Disable
Pad 2: N/C
Pad 3: Ground
Pad 4: Output Q
Pad 5: Output $\bar{Q}$
Pad 6: +Vcc
Pad A: FS0
Pad B: FS1
Pad C: Do not use

FREQUENCY SELECTION TRUTH TABLE		
	FS1	FS0
F1	"HIGH"	"HIGH"
F2	"HIGH"	"LOW"
F3	"LOW"	"HIGH"
F4	"LOW"	"LOW"

Note: Logic "LOW" = 20% Vdd max.
Logic "HIGH" = 80% Vdd min.

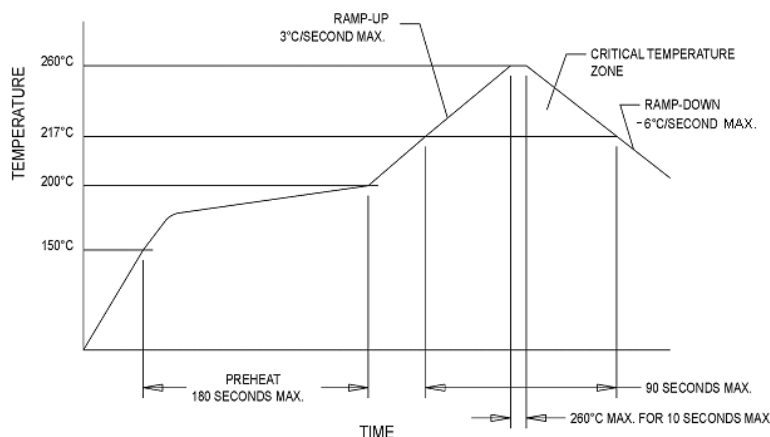


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
1/1/13	0	MM	Original release.