



## SPECIFICATION FOR RoHS 6 COMPLIANT LVPECL OUTPUT SMT VCXO MtronPTI P/N M3200S038

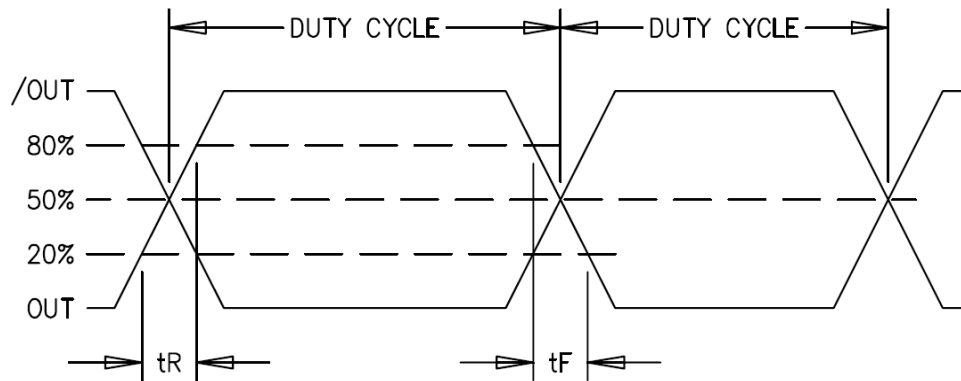
### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>o</sub>		120.000000		MHz	
Frequency Stability						
vs Temperature	ΔF/F	-50		+50	ppm	
vs. Aging		-5		+5		1 <sup>st</sup> year
		-1		+1		Per year thereafter.
RF Output						
Output Type		LVPECL Compatible				
Output Load		50 Ω (V <sub>CC</sub> - 2)				
Symmetry (duty cycle)	T <sub>DC</sub>	45		55	%	Ref. to V <sub>CC</sub> - 1.3 V
Output Logic	V <sub>OH</sub>	V <sub>CC</sub> - 1.02			V	Logic Level “1”
	V <sub>OL</sub>			V <sub>CC</sub> - 1.63	V	Logic Level “0”
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			0.55	nS	From 20% to 80% of Waveform
Enable/Disable Logic		80% V <sub>CC</sub> or N/C			V	Pin 2: Output Enabled
				0.5	V	Pin 2: Output to high-Z
Frequency Adjustment						
Control Voltage Range		0.3	1.65	3.0	V	Pin 1
Pullability (APR)		± 80			ppm	Pin 1
Linearity				5	%	Positive Monotonic
Modulation Bandwidth		10			kHz	- 3 dB
Input Resistance	Z <sub>IN</sub>	500			kΩ	Pin 1
Other Parameters						
Phase Noise			-52		dBc/Hz	@ 10 kHz
			-81			@ 100 kHz
			-106			@ 1 kHz
			-125			@ 10 kHz
			-133			@ 100 kHz
			-145			@ 1 MHz
			-152			@ 10 MHz
Supply Voltage & Power Consumption						
Operating Voltage	V <sub>CC</sub>	3.135	3.3	3.465	V	
Operating Current	I <sub>CC</sub>			125	mA	



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### Output Waveform:



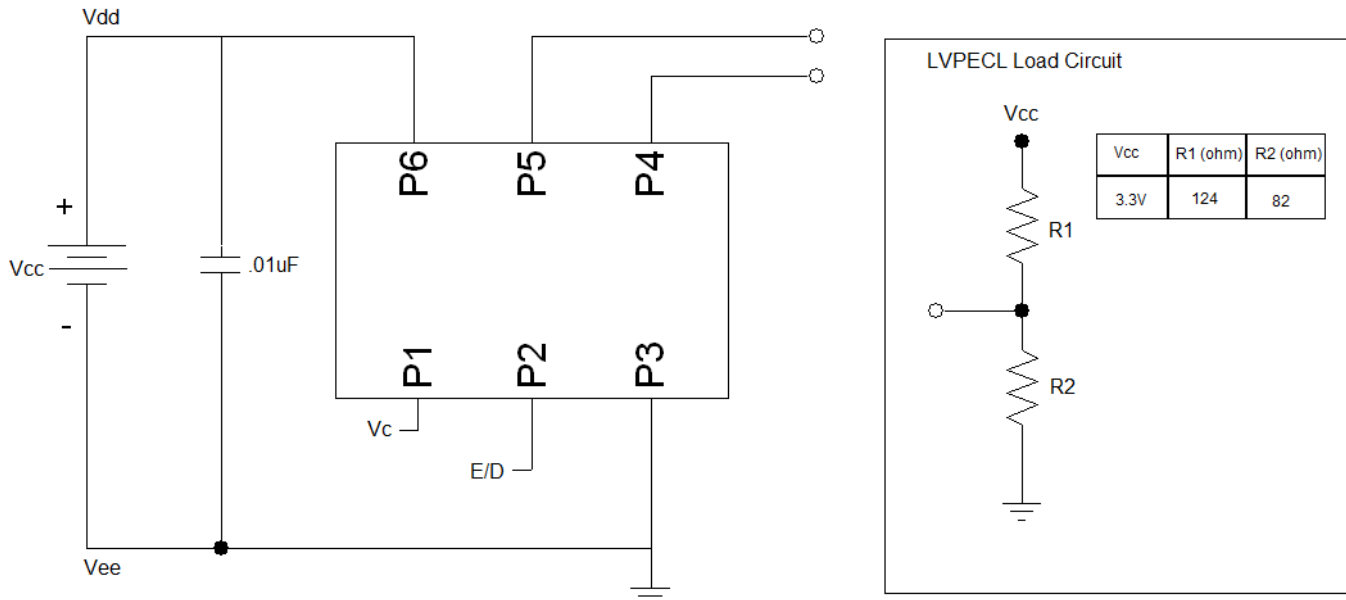
### Environmental Conditions:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	$T_A$	-40		+85	°C	
Storage Temperature	$T_S$	-55		+125	°C	
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)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm cc/s of Helium)					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm cc/s of helium)					
Moisture Sensitivity Level (MSL)	MSL 1					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See Figure 1.					
Package Type	9.0 X 14.0 X 4.7 mm 4 J-lead ceramic. RoHS compliant.					



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### Typical Test Circuit & Load Circuit Diagrams:



### Soldering Conditions:

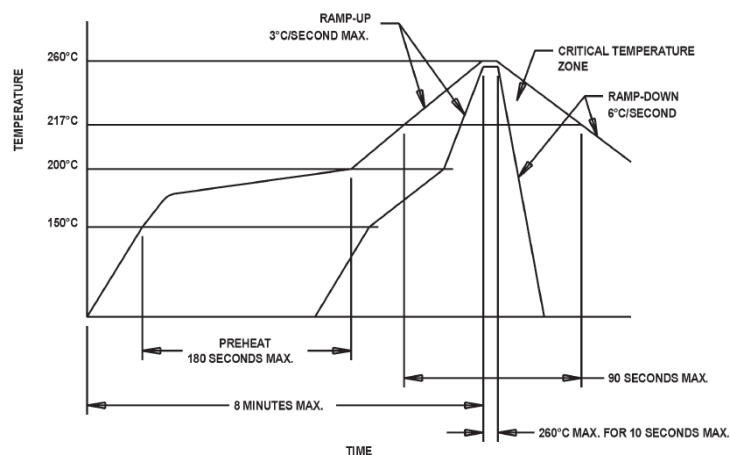


Figure 1



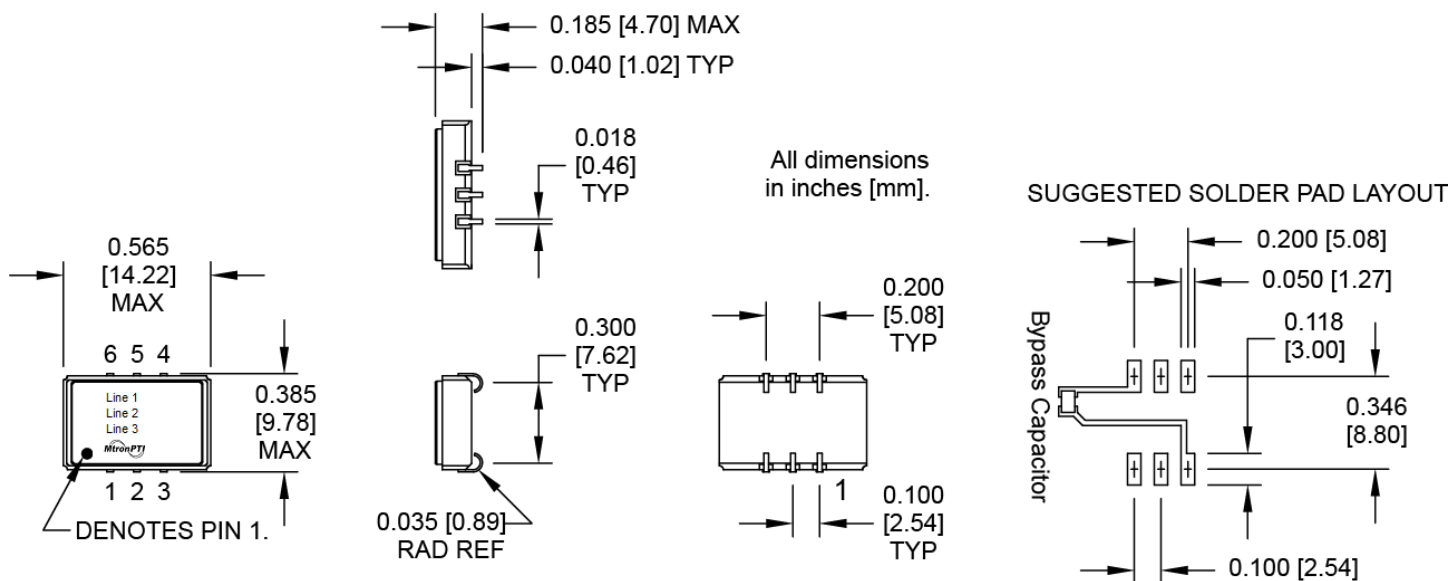
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### Mechanical, Marking, and Pin Out Information:

Part Marking	
Line 1	M3200S038
Line 2	120M0000
Line 3	MPTI yyww

Legend	
yy	Year
ww	Work week

Pin	Function
1	Voltage Control
2	Enable/Disable
3	Ground
4	Output
5	Complementary Output
6	+V <sub>CC</sub>



### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
03/23/16	0	MM	Original release.