

SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT VCXO OSCILLATOR

MtronPTI P/N: M3006S235

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Technology		Fundamental				
Frequency of Operation	F _O		38.880000		MHz	
Frequency Tolerance	F _T	-20		+20	ppm	@+25, V _C = +1.65 V
Frequency Stability	ΔF/F _O	-30		+30	ppm	Inclusive of initial tolerance, deviation over temperature, shock, vibration and voltage
Operating Temperature	T _A	-40		+85	°C	
Storage Temperature	T _S	-55		+125	°C	
Aging		-3		+3	ppm	1 st year
		-1		+1	ppm	Thereafter (per year)
Operating Voltage	V _{DD}	2.97	3.3	3.63	V	
Operating Current	I _{DD}			20	mA	
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T _{DC}	45	50	55	%	@ 50% of V _{DD}
Logic "1" Level	V _{OH}	90% V _{DD}			V	HCMOS load
Logic "0" Level	V _{OL}			10% V _{DD}	V	HCMOS load
Rise/Fall Time	T _R /T _F			5	ns	From 20% to 80%
Pullability	APR	±50			ppm	
Control Voltage Range	V _C	0.3	1.65	3.0	V	
Modulation Bandwidth		10			kHz	-3 dB
Linearity		20			%	Positive monotonic slope
Input Impedance		10			MΩ	
Input Leakage		1			μA	
Tri-state Enable Logic		80% V _{DD} or N/C			V	Pad 2
Tri-state Disable Logic				20% V _{DD}	V	Pad 2. Output to high-Z
Start-up Time	T _{SU}		4	10	ms	

Environmental Conditions:

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)
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	5.0 x 7.0 x 1.9 mm, 6 Pad Ceramic Leadless Chip Carrier (MV3 type)
Termination (Pad) Material	10 to 15 μm of tungsten (W), 1.29 to 8.89 μm of nickel (Ni), 0.3 to 1.0 μm of gold (Au)

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Mechanical, Marking and Layout Information:

Pad	Function
1	Control Voltage
2	Tri-state
3	Ground
4	Output
5	No Connection
6	+V _{DD}

Part Marking	
Line 1	M3006S235
Line 2	38M8800
Line 3	M yywwvv

Legend	
yy	Year
ww	Work week
vv	Factory code

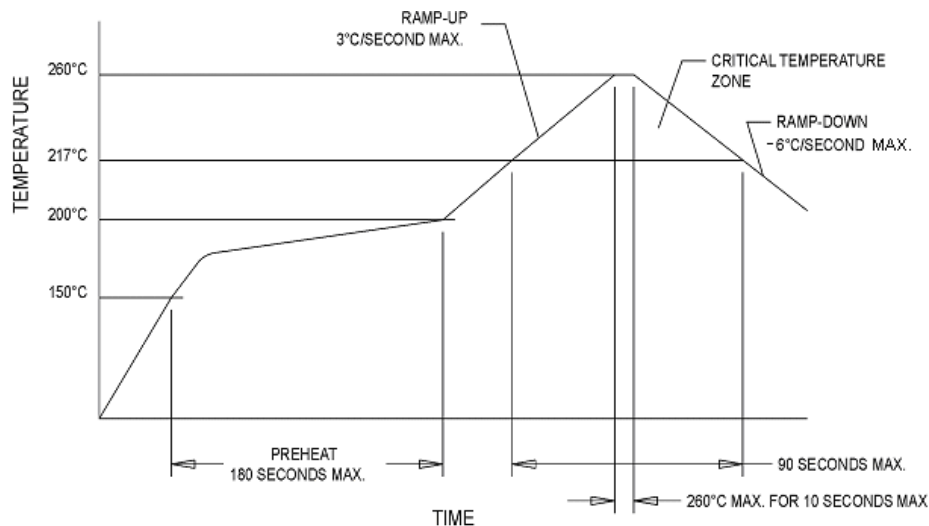
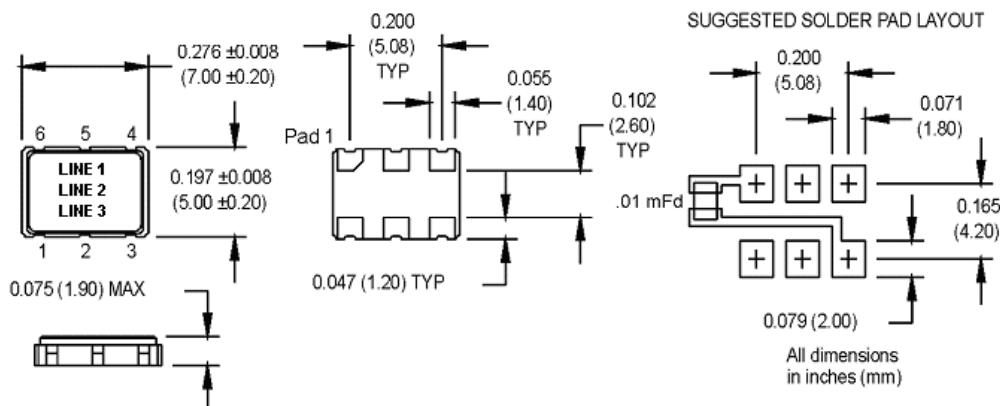


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
7/30/10	0	DDM	Original release.