

SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT VCXO OSCILLATOR

MtronPTI P/N: M3006S226

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Technology		Fundamental				
Frequency of Operation	F _O		25.000000		MHz	
Frequency Stability	ΔF/F _O	-50		+50	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}	3.135	3.3	3.465	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 waveform
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 10% to 90% V _{DD}
Pullability	APR	±50			ppm	
Control Voltage Range		0.3	1.65	3.0	V	
Modulation Bandwidth		10			kHz	-3 dB
Linearity		10			%	Positive monotonic slope
Input Impedance		50			kΩ	
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	
Period Jitter	P _J		3.5		ps RMS	1 sigma
Period Jitter (pk-pk)	P _J		31		ps	
Phase Noise			-70		dBc/Hz	@ 10 Hz
			-100		dBc/Hz	@ 100 Hz
			-127		dBc/Hz	@ 1 kHz
			-144		dBc/Hz	@ 10 kHz
			-151		dBc/Hz	@ 100 kHz
			-151		dBc/Hz	@ 1 MHz

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	M3006S226
Line 2	25M0000
Line 3	M yywwvv

Legend	
yy	Year
ww	Work week
vv	Factory code

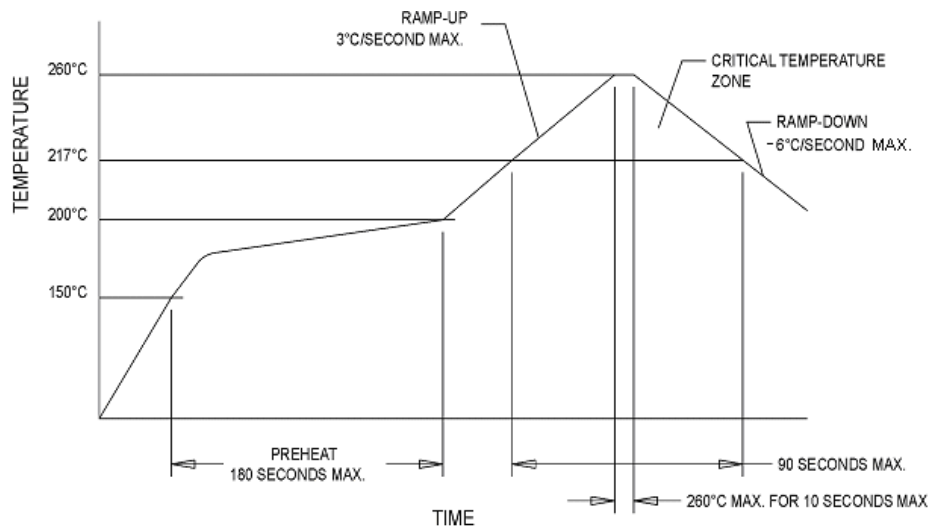
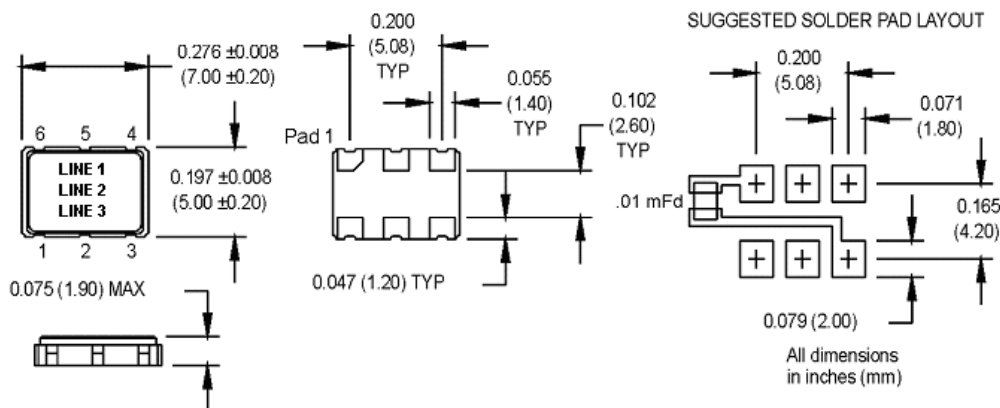


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
7/29/10	0	DDM	Original release.