

## SPECIFICATION FOR RoHS 6 COMPLIANT HCMOS SMT VCXO OSCILLATOR

### MtronPTI P/N: M3006S290

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F <sub>O</sub>		25.000000		MHz	
Frequency Stability						
vs. Temperature	ΔF/F	-30		+30	ppm	Over the operating temperature range, referenced to frequency @ +25°C
vs. Aging		-20		+20		For 10 years
RF Output						
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T <sub>DC</sub>	45	50	55	%	Ref to ½ V <sub>DD</sub>
Logic “1” Level	V <sub>OH</sub>	90% V <sub>DD</sub>			V	HCMOS load
Logic “0” Level	V <sub>OL</sub>			10% V <sub>DD</sub>	V	HCMOS load
Rise/Fall Time	T <sub>R</sub> /T <sub>F</sub>			5	nS	From 10% to 90% V <sub>DD</sub>
Tri-State Function		Logic “1”, or floating			V	Pad 2: Output Enabled
		Logic “0”			V	Pad 2: Output Disabled to high-Z
Frequency Adjustment						
Control Voltage Range	V <sub>C</sub>	0	1.65	3.3	V	
Absolute Pull Range	APR	±100			ppm	Includes initial tolerance, deviation over operating temperature range, variations due to supply, load and aging.
Modulation Bandwidth		10			kHz	-3 dB
Linearity				10	%	Positive monotonic slope
Input Resistance	Z <sub>in</sub>	50			kΩ	Pad 1
Supply Voltage & Power Consumption						
Operating Voltage	V <sub>DD</sub>	2.97	3.3	3.63	V	
Operating Current	I <sub>DD</sub>			40	mA	

#### Environmental & Mechanical Requirements:

Operating Temperature	T <sub>A</sub>	-40		+85	°C	Part must start up and run -55°C, though frequency accuracy requirements do not apply for device temperature below -40°C.
Storage Temperature	T <sub>S</sub>	-55		+125	°C	
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 <sup>-8</sup> 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)					

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

Pad	Function
1	Control Voltage
2	Tri-state
3	Ground
4	Output
5	No Connection
6	+V <sub>DD</sub>

Part Marking	
Line 1	M3006S290
Line 2	25M0000
Line 3	M yy ww

Legend	
yy	Year
ww	Work week
vv	Factory code

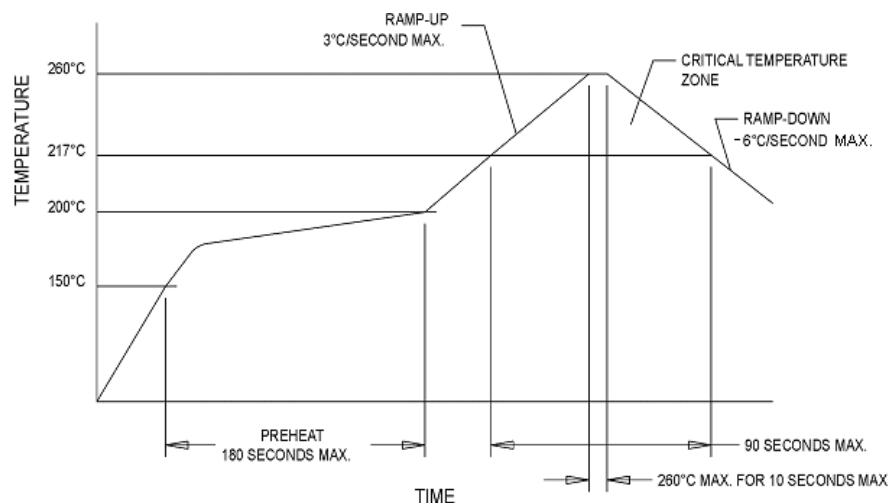
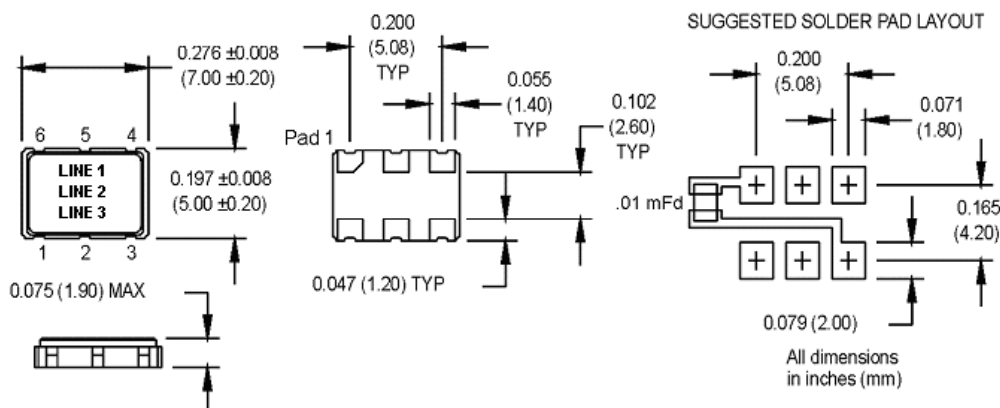


Figure 1

### Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
06/25/14	0	MM	Original release.