



SPECIFICATION FOR SMT VCXO

MtronPTI P/N M3006S224

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		25.000000		MHz	$V_C = +1.65 \text{ V @ } +25^\circ\text{C}$
Frequency Stability	$\Delta F/F$	-50		+50	ppm	Inclusive of initial tolerance at time of shipment, changes in supply voltage, load, temperature, and 10 yr. aging at an average temperature of $+40^\circ\text{C}$.
Operating Temperature	T_A	-40		+85	$^\circ\text{C}$	
Storage Temperature	T_S	-55		+125	$^\circ\text{C}$	
Operating Voltage	V_{DD}	2.97	3.3	3.63	V	
Operating Current	I_{DD}			30	mA	
Output Type		HCMOS Compatible				
Output Load				15	pF	
Symmetry (duty cycle)	T_{DC}	45		55	%	$\frac{1}{2} V_{DD}$
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		3.5	5	ns	From 10% to 90% V_{DD}
Control Voltage (Pad 1)	V_C	0.3	1.65	3.0	V	+1.65 V for center frequency
Pullability (APR)		± 100			ppm	Minimum guaranteed frequency shift from F_O over variations in temperature, aging, supply voltage, and load at an average operating temperature of $+40^\circ\text{C}$ for 10 yrs.
Linearity			5	10	%	Positive slope
Modulation Bandwidth		15			kHz	(-3 dB) $V_C = 1.65 \text{ V}$ Pad 1
Input Impedance (Pad 1)		50			K Ω	
Start-Up Time				10	ms	At application of V_{DD}
Tri-state Function (Pad 2)		2.5			V	Output enabled
Tri-state Function (Pad 2)				0.5	V	Output disabled
Enable Time				100	ns	(Pad 2)
Phase Jitter (RMS)	t_{jms}			1	ps	12 kHz to 20 MHz
Phase Noise			-60		dBc/Hz	@ 10 Hz
			-90		dBc/Hz	@ 100 Hz
			-112		dBc/Hz	@ 1 kHz
			-130		dBc/Hz	@ 10 kHz
			-150		dBc/Hz	@ 100 kHz
			-150		dBc/Hz	@ $\geq 100 \text{ kHz}$



SPECIFICATION FOR SMT VCXO MtronPTI P/N M3006S224

Environmental & Mechanical 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)
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	6-pad 5 X 7 X 1.9 mm leadless ceramic. RoHS compliant.

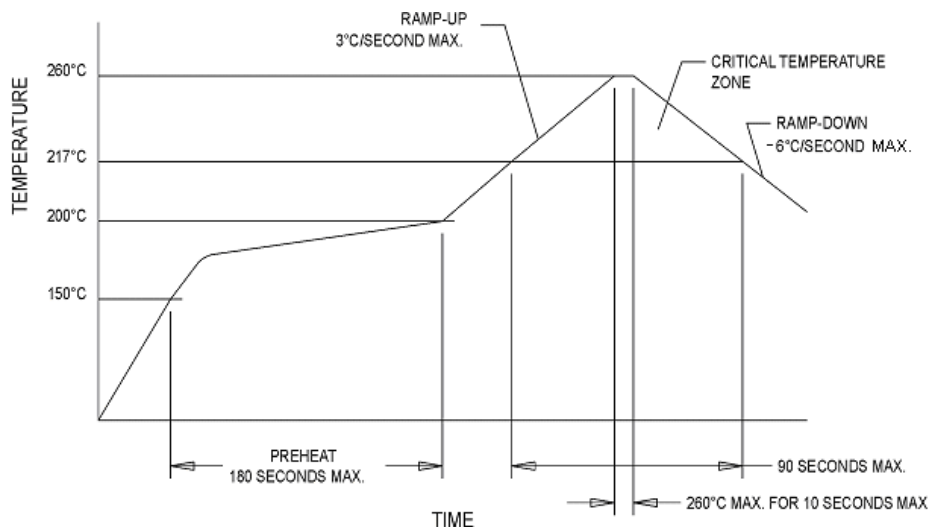


Figure1



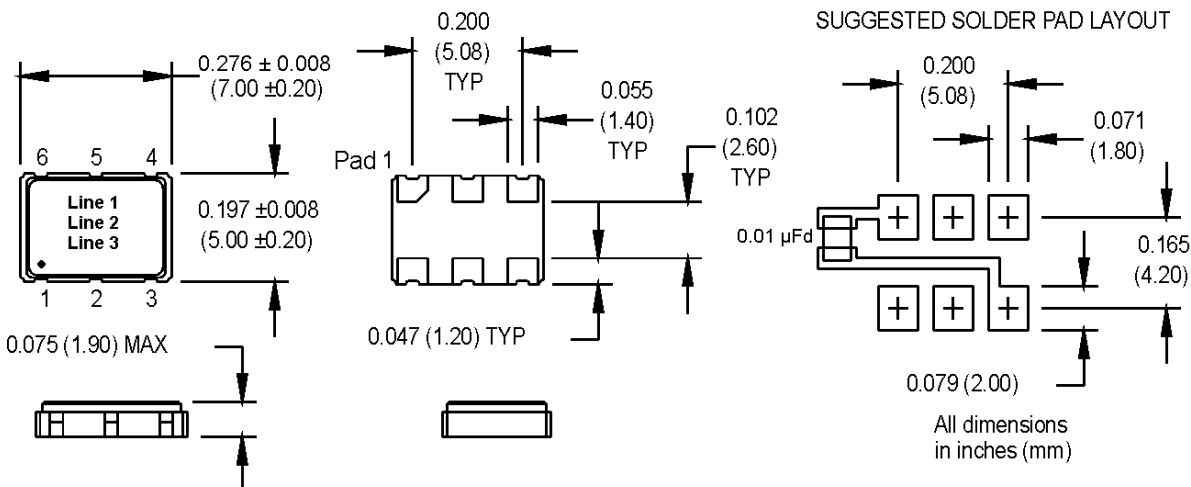
SPECIFICATION FOR SMT VCXO MtronPTI P/N M3006S224

Dimensions, Pin Out, & Marking Information:

Pad	Function
1	Control Voltage
2	Tri-State
3	Ground
4	Output
5	N/C
6	+V _{DD}

Part Marking	
Line 1	M3006S224
Line 2	25M000
Line 3	M yywwvv

Legend	
yy	Year
ww	Work Week
vv	Factory Code



DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
4/7/10	0	WNJ	Original release.