P.O. Box 630 100 Douglas Ave. Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

HCMOS COMPATIBLE OUTPUT SMT VCXO
MtronPTI P/N M3006S249

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		19.200000		MHz	
Frequency Stability	ΔF/F	-50		+50	ppm	
Operating Temperature	T_A	-40		+85	°C	
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		55	%	Ref. to ½ 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 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		± 75			ppm	Over Control Voltage Range
Linearity				±10	%	Positive slope
Input Impedance	Z_{IN}	2M			Ohms	
Tuning Sensitivity			85		ppm/V	
Tri-state Function (Pad 2)		Logic "1", or floating, enables output. Logic "0" disables output to a high-Z.				
Phase Noise			-70	-58	dBc/Hz	@ 10 Hz off-set
			-100	-94	dBc/Hz	@ 100 Hz off-set
			-130	-124	dBc/Hz	@ 1 kHz off-set
			-146	-141	dBc/Hz	@ 10 kHz off-set
			-153	-149	dBc/Hz	@ 100 kHz off-set and beyond

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)
Storage Temperature	-55°C to +125°C
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.

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Dimensions, Pin Out, & Marking Information:

Pad	Function
1	Control Voltage
2	Tri-state Function
3	Ground
4	Output
5	N/C
6	$+V_{DD}$

Part Marking	
Line 1	M3006S249
Line 2	19M200
Line 3	M yywwvv

Legend	
yy	Year
ww	Work Week
vv	Factory Code

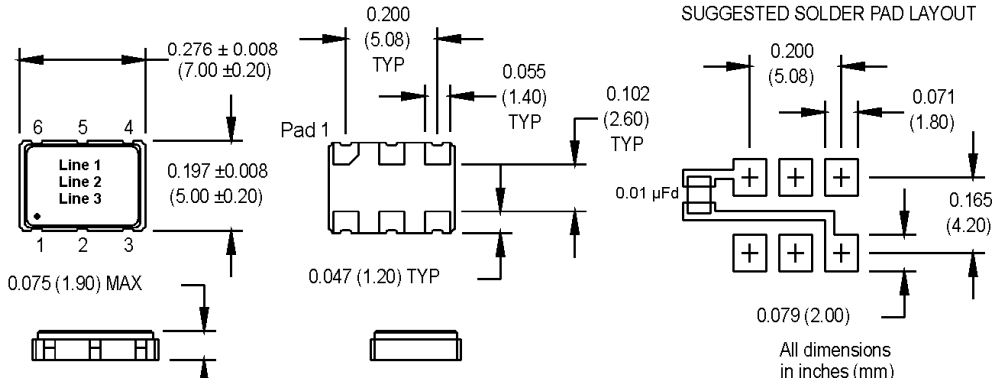
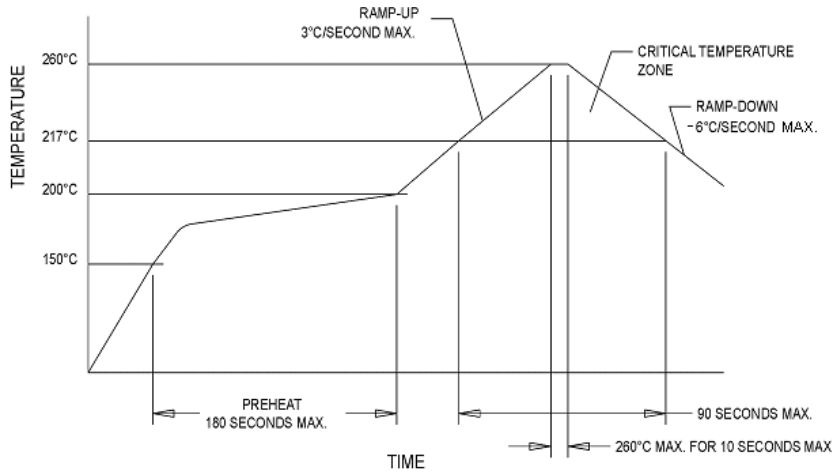


Figure 1



DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
11/15/10	0	WNJ	Original release.
11/17/10	A	WNJ	Corrected frequency marking information.
05/05/11	B	HHG	Added Input Impedance information.
05/11/11	C	HHG	Revised Input Impedance to 2MOhms min. from 500KOhms min.
05/20/11	D	HHG	Added Max. Phase noise information. Revised Typ. Phase noise information.

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