MtronPTI ...when timing matters

1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

SPECIFICATION FOR RoHS 6 COMPLIANT CMOS SMT OSCILLATOR
MtronPTI P/N: M3006S308

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		49.152000		MHz	
Frequency Stability						
Frequency Stability		-50		+50	ppm	Inclusive of initial tolerance, operating temperature, voltage & load variation, shock, vibration, and aging
RF Output						
Output Type		CMOS/TTL Compatible				
Output Load		15			pF	
Symmetry (duty cycle)	T_{DC}	45		55	%	@ 50% V_{DD}
Logic Level "1"		V_{DD}-0.33			V	
Logic Level "0"				0.33	V	
Rise/Fall Time	T_R/T_F			5	ns	Ref. 20% to 80% V_{DD}
Tristate Function		70% V_{DD} or N/C			V	Pad 2: Output enabled
				30% V_{DD}	V	Pad 2: Output disabled to high Z
Frequency Adjustment						
Pullability (APR)		±50			ppm	With respect to nominal frequency at any combination of temperature, supply voltage, shock, vibration, load, and aging
Control Voltage		0.30	1.65	3.30	V	Pad 1
Linearity				10	%	
Modulation Bandwidth		10			kHz	-3 dB
Supply Voltage & Power Consumption						
Operating Voltage	V_{CC}	3.15	3.30	3.45	V	
Operating Current	I_{CC}			25	mA	
Other Parameters						
Phase Jitter (RMS)	Φ_J			10	ps	12KHz to 20MHz

Environmental & Packaging Requirements:

Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	TS	-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^{-8} atm cc/s of Helium)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1.					
Package Type	5 X 7 mm 6-pad leadless ceramic. RoHS compliant.					

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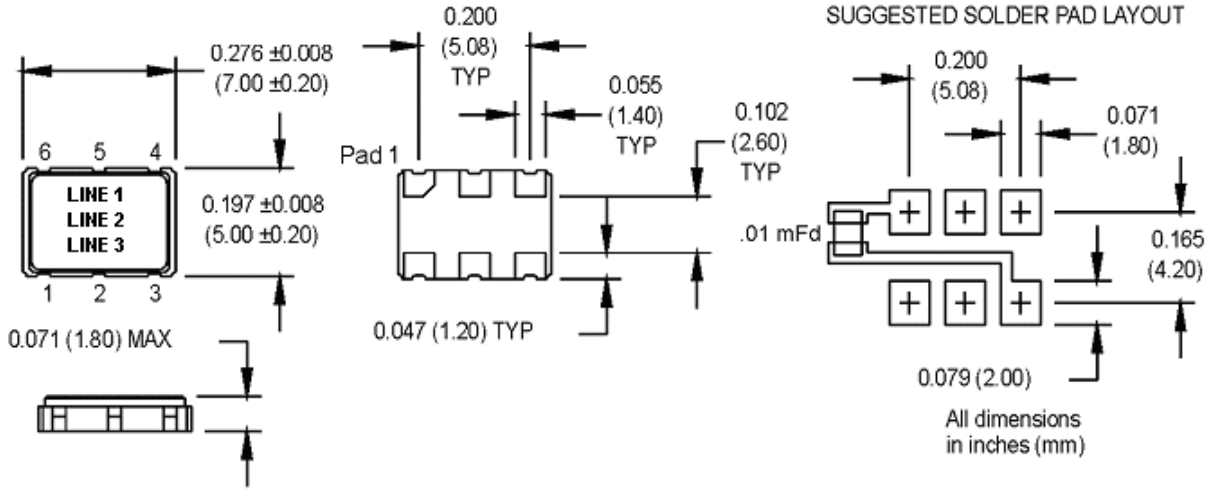
Marking, Pin Out & Dimensions:

Pad	Function
1	Control Voltage
2	Tristate Control
3	Ground
4	Output
5	No connection
6	$+V_{DD}$

Part Marking	
Line 1	M3006S308
Line 2	49M1520
Line 3	M yy ww vv

Legend	
yy	Year
ww	Work week
vv	Factory code



Soldering Conditions:

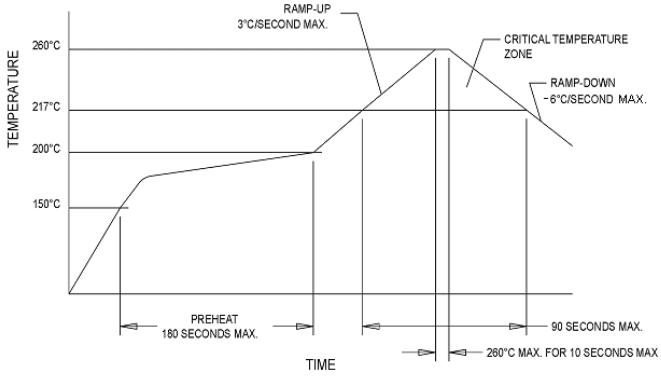


Figure 1

DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
03-2-20	A	BRR	Original release