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 LVDS SMT OSCILLATOR
MtronPTI P/N: M2060S038

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		156.250000		MHz	
Frequency Stability						
Frequency Stability	ΔF/F	-50		+50	ppm	Includes calibration tolerance and deviation over operating temperature range
Aging		-5		+5	ppm	1st year
RF Output						
Output Type		LVDS Compatible				
Output Load		100Ω differential				
Symmetry (duty cycle)	V_{OH}	45		55	%	Ref. to 50% of waveform
Differential Output Voltage	V_{DIFF}	247	330	454	mV	peak-to-peak differential output voltage
Output Offset Voltage	V_{OS}	1.125	1.250	1.375	V	
Rise/Fall Time	T_R/T_F			0.4	ns	20% to 80% of waveform
Start-up Time	T_{SU}			10	ms	$T_{ambient}$ = +25°C
Enable Logic		70% V_{CC} or N/C			V	Pad 1: Output Enabled
Disable Logic				30% V_{CC}	V	Pad 1: Output Disabled to high-Z
Supply Voltage & Power Consumption						
Operating Voltage	V_{CC}	3.135	3.3	3.465	V	
Supply Current	I_{CC}			65	mA	
Other Parameters						
Phase Jitter	ΦJ			0.150	ps	12 kHz – 20 MHz

Environmental & Package Specifications:

Operating Temperature	T_A	-40		+85	°C	
Storage Temperature	T_S	-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)
Moisture Sensitivity Level (MSL)	MSL 1
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	3.20 mm (typ) X 5.00 mm (typ) X 1.40 (max) mm 6-pad leadless ceramic. RoHS compliant.

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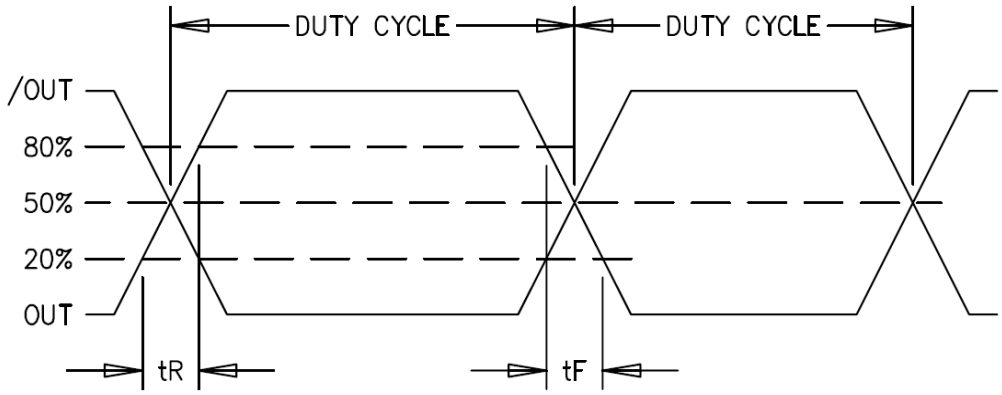
Output Waveform:

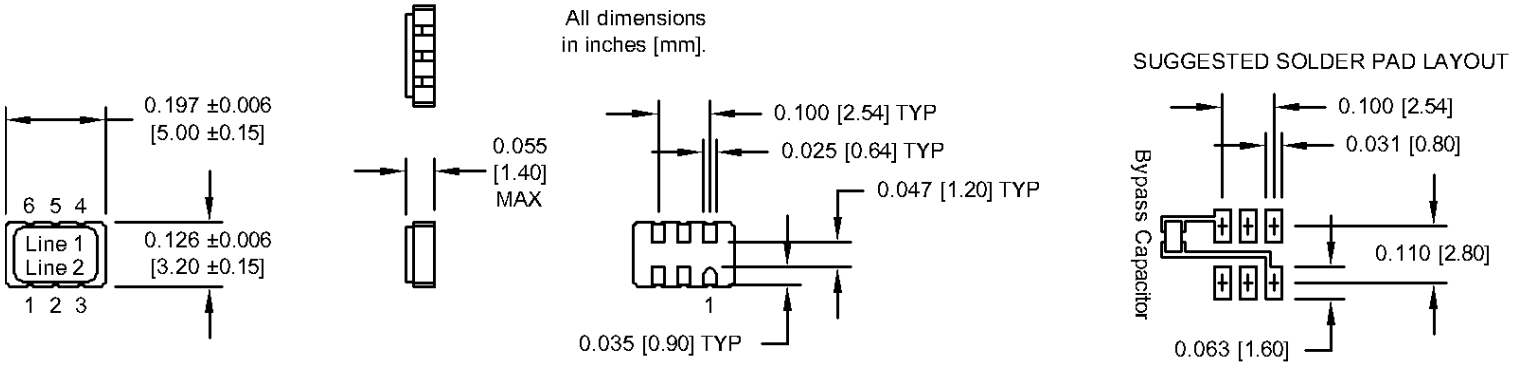


Dimensions, Marking, and Pin Out Information:

Pad	Function
1	Enable/disable
2	N/C
3	Ground
4	Output
5	Complementary Output
6	$+V_{CC}$

Part Marking	
Line 1	156M250
Line 2	M yy ww vv

Legend	
yy	Year
ww	Work Week
vv	Factory code



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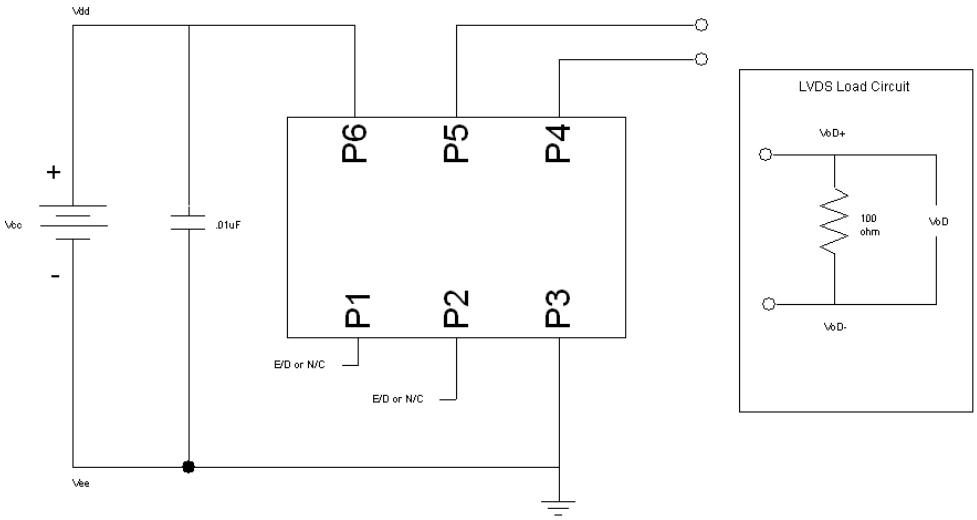
Typical Test Circuit & Load Circuit Diagrams:



Soldering Conditions:

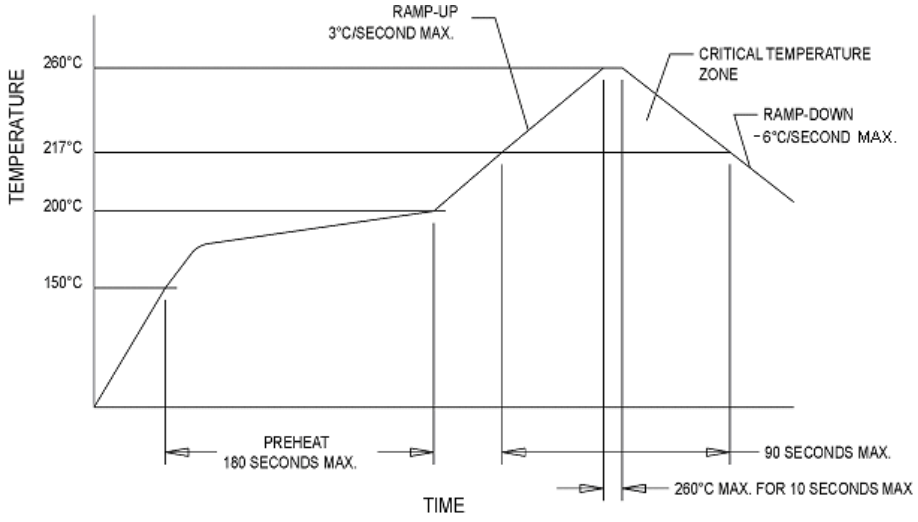


Figure 1

Datasheet Revision Table:

Date	Rev.	Author	Details of Revision
02/21/20	0	MM	Original release.