

# MLH & MLT Series Ceramic J-Lead Oscillator



- Hermetically Sealed Ceramic SMD Package
- Wide Frequency Range
- Available to -55°C to +125°C Operating
- RoHS Compliant Available



Frequency Range	1.000MHZ to 70.000MHZ	
Frequency Stability (Inclusive of Temp., Load, Voltage and Aging)	(See Part Number Guide for Options)	
Operating Temp. Range	(See Part Number Guide for Options)	
Storage Temp. Range	-55°C to +125°C	
Waveform	HCMOS	TTL
Logic "0"	10% Vdd max	0.4V max
Logic "1"	90% Vdd min	2.4V max
Symmetry	40%/60% Optional 45%/55% 50% of waveform w/HCMOS Load	40%/60% Optional 45%/55% 1.4Vdc w/TTL Load
Load	+3.3VDC =5 TTL or 30 pF max	+5.0VDC = 10 TTL Gates or 50pF max
Rise / Fall Time (20% to 80%)	10 nSec max	
Start Time	10 mSec min	
Supply Voltage (Vdd)	+3.3 VDC ±10%	+5.0 VDC 10%
Jitter	Option 1 = 1 pSec typ / Option P = 10 pSec typ	

Supply Current Chart

Frequency Range	Current	Supply	Frequency Range	Current (mA)	Supply
1.000MHZ to 25.000MHZ	9mA max	+5.00 VDC	1.000MHZ to 30.000MHZ	10mA max	+3.3 VDC
25.000MHZ to 40.000MHZ	20mA max	+5.00 VDC	30.000MHZ to 50.000MHZ	20mA max	+3.3 VDC
40.000MHZ to 70.000MHZ	30mA max	+5.00 VDC	50.000MHZ to 70.000MHZ	30mA max	+3.3 VDC

## Mechanical & Environmental Detail

Humidity	85% RH, 85°C, 48 Hours
Hermetic Seal	Leak Rate $2 \times 10^{-8}$ ATM-cm <sup>3</sup> /sec max
Solderability	MIL-STD-202G, Method 208
Reflow Solderability	260°C for 10 seconds
Vibration	MIL-STD-202G, Method 204 35G, 50 to 2000 Hz
Shock	MIL-STD-202G, Method 203 Test Cond E, 1000G's, ½ Sinewave
MIL-STD-883	Available with Level B Screening

## Marking Detail

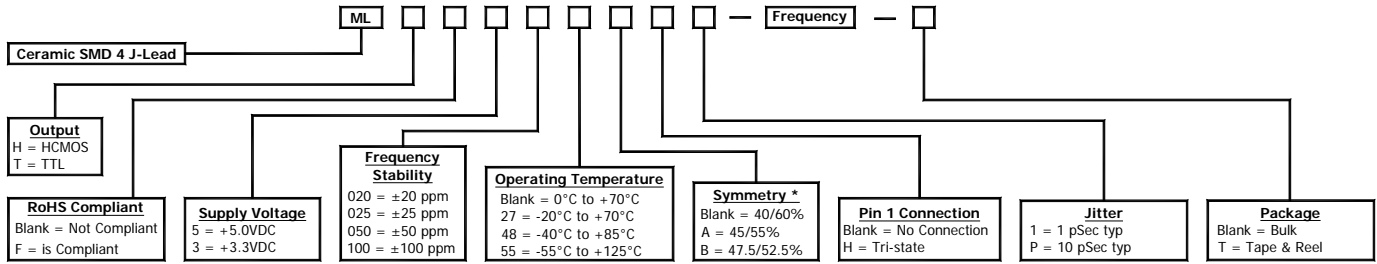
Line 1 = MXXXXX		
M	=	MMD
XXXXX	=	Frequency in MHZ
Line 2 = SYWWL		
S	=	Internal Code
YYWW	=	4 Digit Date Code (Year / Week)
L	=	Denotes RoHS Compliant
Line 3 = XXXXX		
Internal use only		
May vary with lots		
Black dot to denote Pin 1		



**MMD Monitor/Quartztek**  
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 Sales@mmdcomp.com

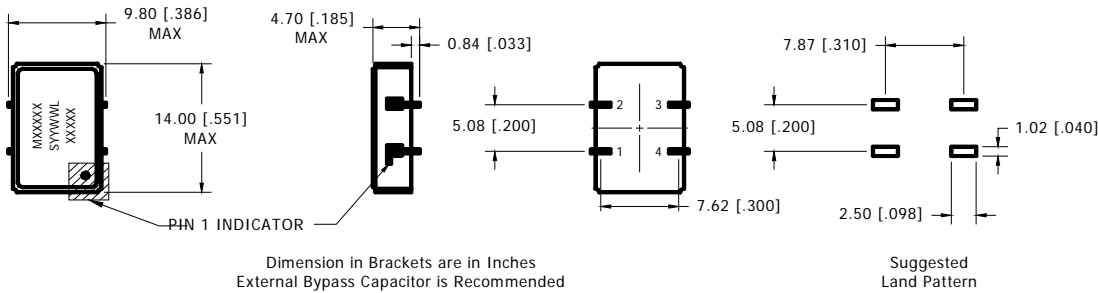


# Part Number Guide



Option B (47.5/52.5%) Available up to 50MHz only  
Please Consult with MMD Sales Department for any other Parameters or Options

# Mechanical Details

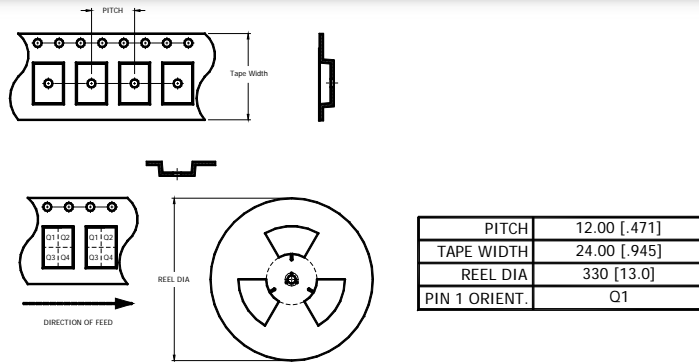


PIN CONNECTIONS	
PIN 1	TRI-STATE or NC
PIN 2	GROUND
PIN 3	OUTPUT
PIN 4	SUPPLY VOLTAGE

Dimension in Brackets are in Inches  
External Bypass Capacitor is Recommended

Suggested Land Pattern

# Tape & Reel Dimensions



**NOTES: UNLESS OTHERWISE SPECIFIED**

- Applicable Standards / Specifications  
ANSI Y14.5M, Dimensions and Tolerances  
EIA-481-B, 8 mm through 200mm Embossed Carrier Taping and 8 mm and 12 mm Punched Carrier Taping of Surface Mount Components for Automatic Handling.
- Dimensions are in millimeters [Inch].
- Tolerances are  $\pm 0.1$  [.004] mm unless otherwise specified.
- Do not scale drawing.



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