MTH Series 5 x 3.2 Ceramic SMD Oscillator

o **Low Profile SMD Package**

o **Hermetically Sealed**

o **Standby & Tristate Available**

o **Wide Frequency Range**

Frequency Range			1.000MHZ to 160.000MHZ	1.000MHZ to 160.000MHZ &	1.000MHZ to 160.000MHZ &	1.000MHZ to 106.250MHZ
Temperature Stability*			(See Part Number Guide for Options)			
Aging (+25°C ±3°C)			±3ppm, ±5ppm for first year			
Operating Temperature Range			(See Part Number Guide for Options)			
Storage Temperature Range			-55°C to +125°C			
Supply Voltage (±10%)			+1.80 VDC	+2.50 VDC	+3.30 VDC	+5.00 VDC
Supply Current		1.000MHZ to 34.999MHZ	8mA	10mA	16mA	25mA
		35.000MHZ to 60.000MHZ	10mA	20mA	25mA	50mA
		60.001MHZ to 99.999MHZ	25mA	30mA	40mA	60mA
		100.000MHZ to 106.250MHZ	35mA	40mA	50mA	80mA
		106.251MHZ to 160.000MHZ	35mA	40mA	50mA	NA
Output Type			HCMOS			
Symmetry (50% of waveform)			40%/60% (45%/55% option)			
Rise/Fall Time (10% to 90% of Supply Voltage)			10nS max			
Load			15pF			
Start-up Time			10mSec max			
Period Jitter: pk-pk			±100ps max			
Period Jitter: One Sigma			±25ps max			
Phase Jitter (12KHZ to 20MHZ)			1ps max			
* Inclusive of Temperature., Load and Voltage						
Pin 1 Function						
Tri-state Operation			Vih = 70% of Vdd min to Enable Output Vil = 30% max or grounded to Disable Output (High Impedance)			
Standby Current			10µA max			

Mechanical & Environmental Detail

Humidity	85% RH, 85°C, 48 Hours
Hermetic Seal	Leak Rate 2 X 10^-8 ATM-cm³/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 = SYYWWL		
	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

Revision:	120925M

Part Number Guide

MTH ☐ ☐ ☐ ☐ — **Frequency** — ☐

5 x 3.2 Ceramic SMD 4 Pad

Supply Voltage
1 = +1.8 VDC
2 = +2.5 VDC
3 = +3.3 VDC
5 = +5.0 VDC

Frequency Stability
020 = ±20 ppm
025 = ±25 ppm
050 = ±50 ppm
100 = ±100 ppm

Operating Temperature
Blank = 0°C to +70°C
27 = -20°C to +70°C
48 = -40°C to +85°C

Symmetry
Blank = 40/60%
A = 45/55%

Pin 1 Connection
Blank = No Connection
H = Tri-State
S = Stand-by

Packaging
Blank = Bulk
T = Tape and Reel

Please Consult with MMD Sales Department for any other Parameters or Options

Mechanical Details

5.20 [.205] Max
1.60 [.063] Max
3.40 [.134] Max
MXXXXX SYYWWL XXXXX
← Pin 1 designator located in this area

2.54 [.100]
1.20 [.047]
1.20 [.047]
3 4
2 1

2.54 [.100]
1.10 [.043]
2.20 [.087]
1.40 [.055]

Dimensions in brackets are in inches
External bypass capacitor is recommended

Recommended Land Pattern

Pin Connections	
Pin 1	NC, Tri-state or Stand-by
Pin 2	Case Ground
Pin 3	Output
Pin 4	Supply Voltage

Pad Plating
1. Base or under conductor Ni thickness 1.3 to 8.8 microns
2. Final plating: Au (99.97%) 0.5 to 1.2 microns

Tape & Reel Dimensions

4.00
2.00
Pitch
1.75
7.50
Tape Width
B0
A0
K0
Reel DIA

Q1 Q2
Q3 Q4
Q1 Q2
Q3 Q4

Direction of Feed

Pitch	4.00 [.157]
Tape Width	8.00 [.315]
Reel DIA	180 [7.0]
Count	1000
Pin 1 Orient	Q1

NOTES : UNLESS OTHERWISE SPECIFIED
1. 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.
2. Dimensions are in millimeters [inch].
3. Tolerances are ±0.1 [.004] mm unless otherwise specified.
4. Do not scale drawing.

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