HM INTERNATIONAL
Frequency Technology

EUROPEAN CRYSTAL ORGANIZATION
Frequency Technology

KLOVE ELECTRONICS
Frequency Technology

MX3C   MEMS OSCILLATOR

FEATURES

3.2x2.5x0.75 mm
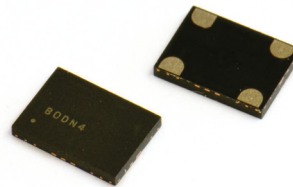
- Silicon MEMS resonator based oscillator
- Low power oscillator
- Operating temperature from -55° to 125°C
- Very high shock and vibration resistance
- Fast delivery
- 500 million hours MTBF

Item	Specification						
Frequency Range	1.0 - 110.0 MHz			115.0 - 137.0 MHz			
Output Logic	CMOS						
Overall Frequency Stability *	± 20 ppm ~ ± 100 ppm (see options)						
Operating Temperature Range	-20° ~ +70°C commercial application -40° ~ +85°C industrial application -55° ~ +125°C (from 1.0 - 110.0 MHz)						
Supply Voltage Vdd	+1.8V ±10%	+2.5V ±10%	+2.8V ±10%	+3.0V ±10%	+3.3V ±10%	+1.8V to 3.3V ±10%	+2.5V to 3.3V ±10%
Supply Current	4 mA ~ 15 mA	4 mA ~ 15 mA	4 mA ~ 15 mA	4.5 mA ~ 20 mA	4.5 mA ~ 20 mA	4.5 mA ~ 20 mA	
Output Level	VOH ≥ 0.9 Vdd			VOL ≤ 0.1 Vdd			
Output Load	15 pF other load capacitance possible , please consult us.						
Symmetry	45 / 55 %						
Rise / Fall time Fr/Ff	3 ns max						
Tri-state Enable (See options)	pin #1 = high or open pin #1 = low			pin #3 ==> oscillation pin #3 ==> high impedance			
Tri-state Power Down (See options)	pin #1 = high or open pin #1 = low			pin #3 ==> oscillation pin #3 ==> low output			
Standby current max.	5 µA max (for Power Down function)						
Start-up Time	5 ms max.						
RMS Jitter (12 kHz to 20 MHz band)	2.5 ps max.						
Packing Unit	1000pcs / reel						
Marking	Lot code only						
Shock Resistance	up to 50000 G						

(*) Includes initial tolerance @+25°C , stability over operating temperature , stability vs. load change , stability vs. supply change and one year aging

Customer specifications on request

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OPTIONS & ORDERING INFORMATION

| MX3C						.... MHz
	Supply Voltage *	Operating Temp. *	Overall Stability *	Tri-state Function	Output Load *	Frequency in MHz
	18 = +1.8V	**F** = -20° / +70°C	**20** = ±20 ppm	**E** = Tri-state Enable	**blanc** = 15 pF	Please specify the frequency in MHz
	25 = +2.5V	**K** = -40° / +85°C	**25** = ±25 ppm	**B** = Tri-state Power Down	**H** = >15 pF , consult us	
	28 = +2.8V	**N** = -55° / +125°C	**30** = ±30 ppm	**F** = None		
	30 = +3.0V		**50** = ±50 ppm			
	33 = +3.3V		**100** = ±100 ppm			
	1V3 = +1.8V to +3.3V					
	2V3 = +2.5V to +3.3V					

* Note : Not all combinations are possible , please consult us.

OUTLINE DIMENSIONS (MM)

Package Size – Dimensions (Unit: mm)

3.2 ± 0.05
#4 #3
YXXXX
#1 #2
2.5 ± 0.05

2.1
#3 #4
0.9
0.7
#2 #1
0.9

0.75 ± 0.05
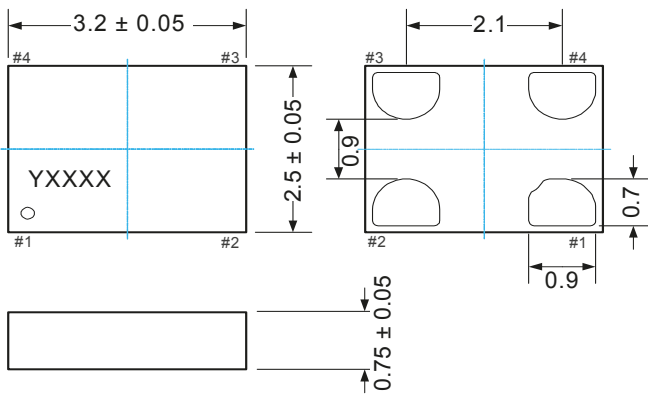
Recommended Land Pattern (Unit: mm)

2.2
1.9
1.2
1.4
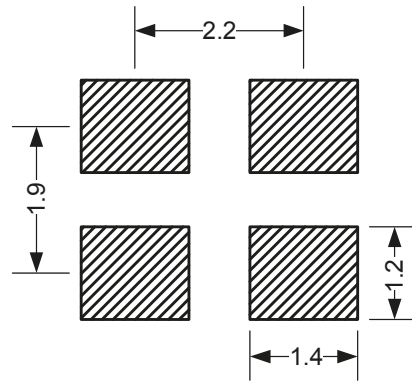
Pin Connections	
#1 : E/D or NC	
#2 : GND	
#3: Output	
#4 :Vdd	