

MTTB Series – 5 X 3.2 Ceramic SMD VCTCXO



- Low Profile SMD Device
- Hermetically Sealed
- Tight Stability Over Temperature
- Low Power Consumption



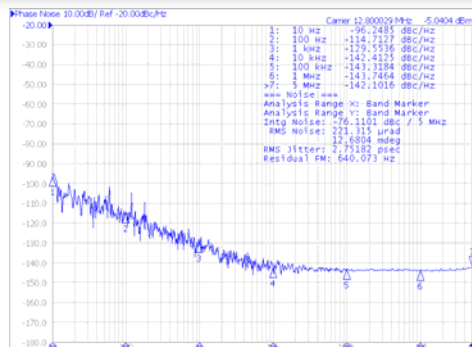
Frequency Range	10.000MHZ to 32.000MHZ			
Frequency Stability vs Temperature*	(See Frequency Stability vs Temperature Table)			
Frequency vs Time	±1 ppm per year			
Operating Temperature Range	(See Frequency Stability vs Temperature Table)			
Storage Temperature Range	-40°C to +85°C			
Supply Voltage (±10%)	+2.6 VDC to +2.8VDC	+3.0 VDC to +3.3VDC	+2.6 VDC to +2.8VDC	+3.0 VDC to +3.3VDC
Control Voltage	Vc = +1.40VDC +0.40VDC to +2.40VDC	Vc = +1.50VDC +0.50VDC to +2.80VDC	Vc = +1.40VDC +0.40VDC to +2.40VDC	Vc = +1.50VDC +0.50VDC to +2.80VDC
Supply Current	1.5mA max		5mA max	
Output Type	Clipped Sinewave		HCMOS	
Output Level	0.9 – 1.4 Vp-p		Logic "1" = 90% of Vdd Min Logic "0" = 10% of Vdd Max	
Load	10k Ohms // 10pF		15pF	
Harmonics	-10dBc max			
Frequency Tunning Range	±3 ppm to ±25 ppm			
Phase Noise	-135dBc/Hz max (at 1kHz offset)			
Start-up Time	2ms max (Output level will be 90% from the final value)			
* Inclusive of Temperature., Load, and Voltage				

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Environmental & Mechanical Detail

Shock	MIL-STD-883, Method 2002, Condition B
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-883, Method 215
Vibration	MIL-STD-883, Method 2007, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Fine Leak Test	MIL-STD-883, Method 1014, Condition A-2
MSL	Level 1 per IPC/JEDEC J-STD 20

Phase Noise



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		

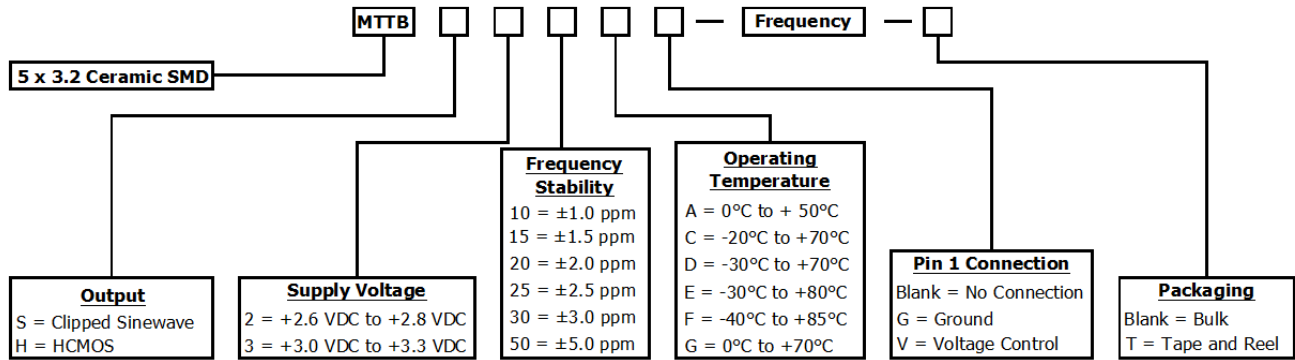


MMD Monitor/Quartztek
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 Sales@mmdcomp.com



Revision: MTTB121120J

Part Number Guide



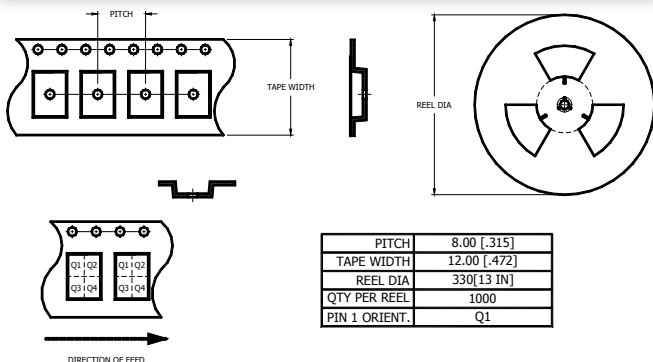
Please Consult with MMD Sales Department for any other Parameters or Options

Frequency Stability vs Temperature Table

Code	Stability	10	15	20	25	30	50
	Temp	± 1.0 ppm	± 1.5 ppm	± 2.0 ppm	± 2.5 ppm	± 3.0 ppm	± 5.0 ppm
A	0°C TO +50°C	•	•	•	•	•	•
G	0°C TO +70°C	•	•	•	•	•	•
C	-20°C TO +70°C	•	•	•	•	•	•
D	-30°C TO +70°C	•	•	•	•	•	•
E	-30°C TO +80°C	•	•	•	•	•	•
F	-40°C TO +85°C	•	•	•	•	•	•

• = Available

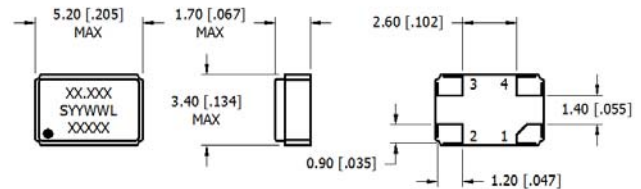
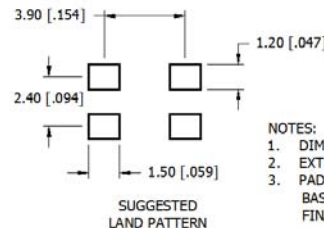
Tape & Reel Dimensions



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.
3. Tolerances are ± 0.10 [.004] mm unless otherwise specified.
4. Do not scale drawing.

Mechanical Details



PIN CONNECTIONS	
PIN 1	VOLTAGE CONTROL
PIN 2	CASE GROUND
PIN 3	OUTPUT
PIN 4	SUPPLY VOLTAGE

NOTES:

1. DIMENSIONS IN BRACKETS ARE IN INCHES
2. EXTERNAL BYPASS CAPACITOR RECOMMEND
3. PADS MATL:
BASE OR UNDER CONDUCTOR - 1.3 TO 1.8 MICRONS
FINAL PLATING - GOLD (99.97%) 0.8 TO 1.2 MICRONS



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