MTEH, MTES, and MTEZ TCXO Series

- **Industry Standard Package**
- **RoHS Compliant Available**
- **Stability Available to ±1 ppm**
- **Operating Voltage +3.3VDC or +5.0VDC**
- **Voltage Control Option**

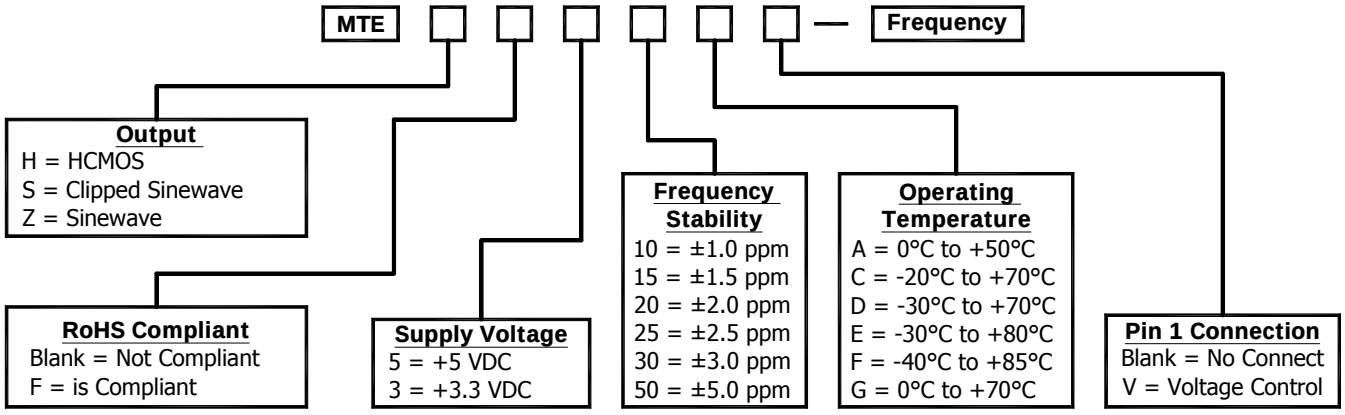
ELECTRICAL SPECIFICATIONS:

Output	HCMOS	Clipped Sinewave	Sinewave
Frequency Range	1.000MHZ to 160.000MHZ	8.000MHZ to 160.000MHZ	8.000MHZ to 160.000MHZ
Load	10k Ohms // 15pF	10k Ohms // 15pF	50 Ohms
Supply Current	35mA max	3mA max	25mA max
Output Level	Logic "1" = 90% of Vdd min Logic "0" = 10% of Vdd max	1.0V p-p min	7 dBm
Symmetry	40%/60% at 50% of Waveform	N/A	N/A
Freq. Stability vs Temp (Note 1)	(See Frequency Stability vs Temperature Table)		
Freq. Stability vs Aging	±1 ppm per year max		
Freq. Stability vs Voltage	±0.3 ppm with a 5% change in Vdd		
Freq. Stability vs Load	±0.3 ppm with a 10% change in Load		
Storage Temperature	-40°C to +85°C		
Supply Voltage (Vdd)	+3.3VDC ±5%	+5.0VDC ±5%	
Control Voltage with VC option	+1.65VDC ±1.50VDC Positive Slope	+2.50VDC ±2.00VDC Positive Slope	

Pin 1 Connection	
No Connection	No Connection
VC Option	±10 ppm min

Mechanical Trimmer	±3 ppm min

PART NUMBER GUIDE:



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

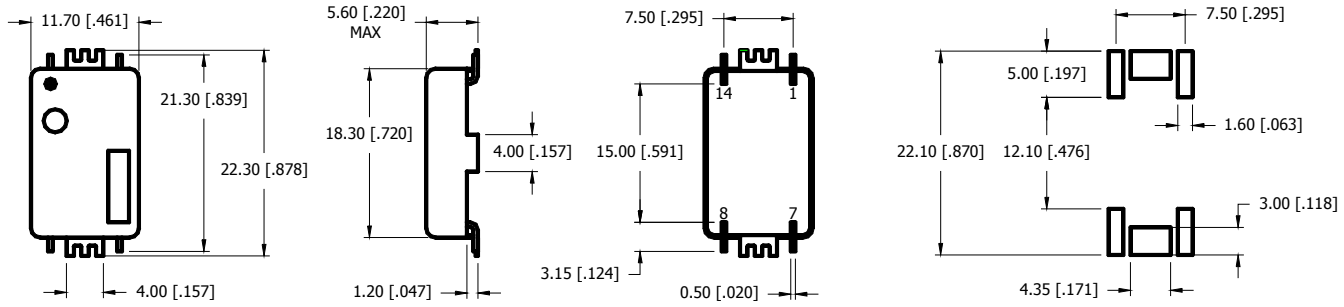
MMD Components, 30400 Esperanza, Rancho Santa Margarita, CA, 92688
Phone: (949) 709-5075, Fax: (949) 709-3536, www.mmdcomp.com
Sales@mmdcomp.com

FREQUENCY STABILITY vs TEMPERATURE TABLE:

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

● = Available ☐ = Consult with the Manufacturer

MECHANICAL DIMENSIONS:



DIMENSION IN BRACKETS ARE IN INCHES
EXTERNAL BYPASS CAPACITOR IS RECOMMENDED

RECOMMENDED
LAND PATTERN

ENVIRONMENT / MECHANICAL:

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

MARKING:

Line 1: MXX.XXX
XX.XXX = Frequency in MHz

Line 2: SYYMML
S = Internal Code
YYMM = Date Code (Year/Month)
L = Denotes RoHS Compliant

Line 3: XXXXX
Internal Manufacture Code

Black Dot to denote Pin 1

PHASE NOISE:

PHASE NOISE PLOT
COMING SOON

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