

# MTF, MTL, MVTF & MVTL Series TCXO & VCTCXO



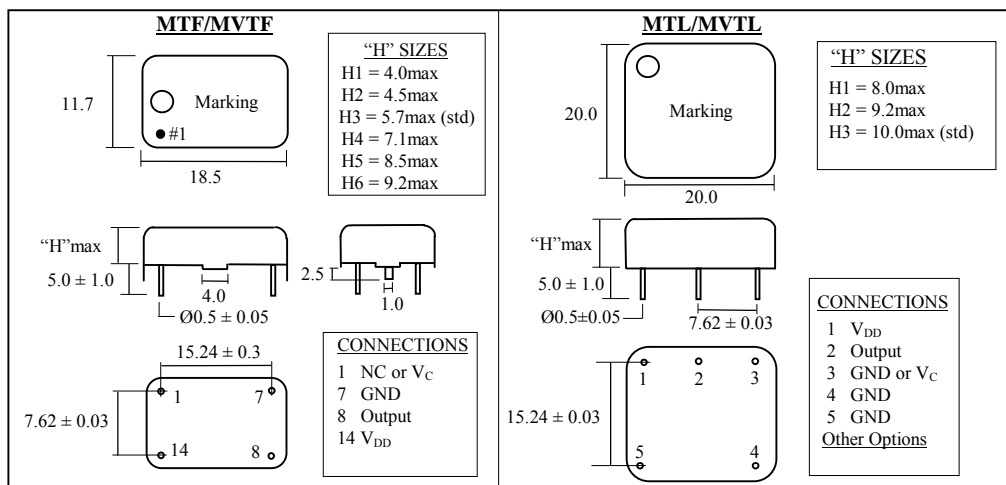
**Microcom  
Devices Ltd.**

- FEATURES**
- . Hermetically Sealed Metal, Thru-Hole Packages
  - . High Precision/Wide Frequency & Temperature Range
  - . 5V, 3.3V, 3V Options, HCMOS, TTL & Sinewave O/P

**SPECIFICATIONS** (subject to change w/o notice)

Parameters	HCMOS/TTL	Clipped Sinewave
Frequency Range	(1.2MHz) 8MHz ~ 40MHz (100MHz)	8MHz ~ 40MHz
Frequency Stability 25°C Ref. (max)	±1ppm ~ 5ppm per operating temperature range; ±0.3ppm/Supply; ±0.3ppm/ Load; ±1ppm aging/1 <sup>st</sup> yr	±1ppm ~ 5ppm per operating temperature range; ±0.3ppm/Supply; ±0.3ppm/ Load; ±1ppm aging/1 <sup>st</sup> yr
Internal Trim (min)	±3ppm	±3ppm
Operating Temp.	0°C ~ +50°C to -40°C ~ +85°C	0°C ~ +50°C to -40°C ~ +85°C
Storage Temp.	-40°C ~ +100°C	-40°C ~ +100°C
Supply Voltage V <sub>DD</sub>	V <sub>DD</sub> : 5V, 3.3V, 3V ± 5%	V <sub>DD</sub> : 5V, 3.3V, 3V ± 5%
Supply Current (max)	15mA over 1.2MHz ~ 8MHz 20mA over 9MHz ~ 20MHz 25mA over 21MHz ~ 30MHz 30mA over 31MHz ~ 40MHz	2mA over 8MHz ~ 25MHz 3mA over 26MHz ~ 40MHz
Output Load (max)	10 TTL/15pF HCMOS	10KΩ // 10pF
Output Voltage	V <sub>OL</sub> = 0.4V/10% of V <sub>DD</sub> max, TTL/HCMOS load V <sub>OH</sub> = 2.4V/ 90% of V <sub>DD</sub> min, TTL/HCMOS load	1.0Vpp Min @ V <sub>DD</sub> : 5V 0.8Vpp Min @ V <sub>DD</sub> : 3.3V/3V
Rise/Fall Time (max)	10nsec	10nsec
Control Voltage V <sub>C</sub>	2.5V±2.0V, 1.65V±1.0V, 1.5±1.0V @ 5/3.3/3V V <sub>DD</sub>	2.5V±2.0V; 1.65V±1.0V; 1.5±1.0V @ 5/3.3/3V V <sub>DD</sub>
Frequency Control	±5ppm ~ ±50ppm min; positive slope	±5ppm ~ ±50ppm min; Positive Slope
Phase Noise (max)	-150/147/145/135/115dBc/Hz @ 1MHz/100KHz/10KHz/1KHz/100Hz	-150/147/145/135/115dBc/Hz @ 1MHz/100KHz/10KHz/1KHz/100Hz

**OUTLINE**  
(mm) not to scale



**PART NUMBERING**

Model	Supply	Frequency	Stability	Temperature Range	Output	Other Options
MTF	5: 5V	MHz	±PPM	Blank: -10C ~ +60C	Blank: CMOS/TTL	Height “H”, Negative Slope, Pin-Out, etc.
MVTF	3.3: 3.3V	Value	Value	M: -20C ~ +70C	H: HCMOS	
MTL	3: 3V			N: -30C ~ +75C	S: Sinewave	
MVTL				J: -40C ~ +60C		
				K: -40C ~ +75C		
				I: -40C ~ +85C		
<b>Example: MTF5-10.000-2.5M</b>				<b>Please Consult Microcom Devices Ltd. for Custom Specifications</b>		