



M6001, M6002, M6003 & M6004 Series

9x14 mm FR-4, 5.0 or 3.3 Volt, HCMOS/TTL, TCXO and TCVCXO



Features:

- Operating stabilities to ± 0.5 ppm
- Stratum III stability of ± 4.6 ppm (non-holdover)

Applications:

- Ideal for Signal Processing, Military/Avionic Communications, Flight Controls, WLAN, Basestations, DWDNM, SERDES, SONET/SDH, 10G and 40G Ethernet applications

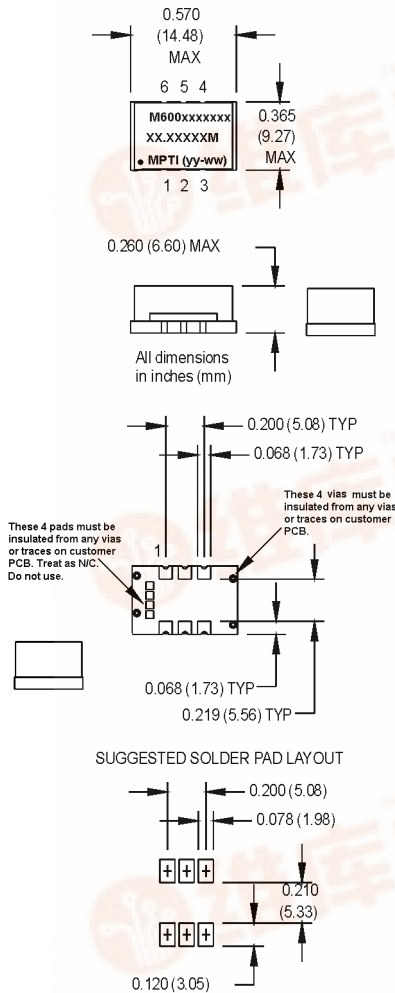
Ordering Information

Product Series	M6001 - M6004	1	L	F	C	K	-R	00.0000 MHz
M6001 = 3.3 V TCXO								
M6002 = 5.0 V TCXO								
M6003 = 3.3 V VCTCXO								
M6004 = 5.0 V VCTCXO								
Temperature Range	1: 0°C to +70°C	2: -40°C to +85°C						
8: 0°C to +50°C								
Stability	L: ± 4.6 ppm	K: ± 2 ppm						
J: ± 1 ppm	G: ± 0.5 ppm (0° to 50°C only)							
Frequency Control (Pin #1)	F: Fixed (M6001 and M6002 only)							
V: Voltage Controlled (M6003 and M6004 only)								
Symmetry/Logic Compatibility	C: 45/55% CMOS							
Package/Lead Configurations	K: FR-4 6 pad	D: DIP (contact factory)						
RoHS Compliant	Blank: non-RoHS compliant part							
-R: RoHS compliant part								
Frequency (customer specified)								

Pin Connections

FUNCTION	PAD
N/C or Control Voltage	1
Tristate	2
Ground/Case	3
Output	4
N/C	5
+Vdd	6

M6001Sxxx, M6002Sxxx, M6003Sxxx & M6004Sxx - Contact factory for datasheets.



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	5		30	MHz	
Operating Temperature	T _A	(See Ordering Information)				
Storage Temperature	T _S	-55		+105	°C	
Frequency Stability		(See Ordering Information)				See Note 1
Aging						See Note 2
1st Year				1.0	ppm	
10 year aging				3.0	ppm	
Input Voltage	V _{dd}	3.15	3.3	3.45	V	M6001, M6003
		4.75	5.0	5.25	V	M6002, M6004
Input Current	I _{dd}			10	mA	M6001, M6003
				20	mA	M6002, M6004
Pullability		± 10			ppm	M6003/M6004 only (positive slope)
Control Voltage	V _c	0.5	1.5	2.5	V	M6003/M6004 only
Modulation Bandwidth	f _m	10			kHz	M6003/M6004 only
Input Impedance	Z _{in}	50k			Ohms	M6003/M6004 only
Output Type						CMOS
Load				15	pF	
Symmetry (Duty Cycle)		(See Ordering Information)				
Logic "1" Level	V _{oh}	90 %			V _{dd}	
Logic "0" Level	V _{ol}			10%	V _{dd}	
Rise/Fall Time	T _r /T _f			3	ns	
Tristate Function		Input Logic "1": output active Input Logic "0": output disables				
Start up Time		10			ms	
Phase Noise (Typical)	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
@19.44 MHz	-77	-107	-128	-143	-148	

- Stability is inclusive of initial calibration, temperature, reflow, supply, load, shock, vibration, and ten year aging at 55°C.
- "L" stability version only. All other stability options - initial calibration and deviation vs. temperature. TTL Load - see load circuit diagram #1. HCMOS Load - see load circuit diagram #2.



MtronPTI Lead Free Solder Profile

