

M6001, M6002, M6003 & M6004 Series

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



Features:

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

Applications:

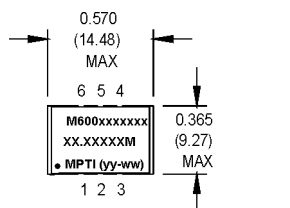
- Ideal for Signal Processing, Military/Avionic Communications, Flight Controls, WLAN, Basestations, DWDNM, SERDES, SONET/SDH, 10G and 40G Ethernet applications

Ordering Information

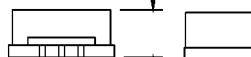
Product Series	M6001 - M6004	1	L	F	C	K	-R	00.0000	MHz
M6001 = 3.3 V TCXO									
M6002 = 5.0 V TCXO									
M6003 = 3.3 V VCTCXO									
M6004 = 5.0 V VCTCXO									
Temperature Range									
1: 0°C to +70°C									
2: -40°C to +85°C									
8: 0°C to +50°C									
Stability									
L: ± 4.6 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

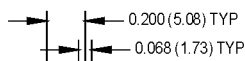
FUNCTION	PAD
N/C or Control Voltage	1
Tristate	2
Ground/Case	3
Output	4
N/C	5
+Vdd	6



0.260 (6.60) MAX



All dimensions in inches (mm)

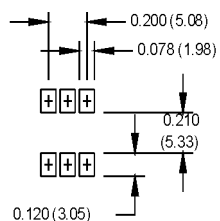


These 4 pads must be insulated from any vias or traces on customer PCB. Treat as N/C. Do not use.

These 4 vias must be insulated from any vias or traces on customer PCB.

0.068 (1.73) TYP
0.219 (5.56) TYP

SUGGESTED SOLDER PAD LAYOUT



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	Tr/Tf			3	ns	
Tristate Function		Input Logic "1": output active Input Logic "0": output disables				
Start up Time		10			ms	
Phase Noise (Typical) @19.44 MHz		10 Hz -77	100 Hz -107	1 kHz -128	10 kHz -143	100 kHz -148
						Offset from carrier

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

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

Please see www.mtronpti.com for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.