

# M6001 & M6002 Series

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



- Stratum 3 compliant stability and aging
- Ideal for WLL/DWDM/ATM, and SONET/SDH applications

### Ordering Information

**M6001/M6002 1 L F A K 00.0000 MHz**

**Product Series**  
M6001 = 3.3 V  
M6002 = 5.0 V

**Temperature Range**  
1: 0°C to +70°C      2: -40°C to +85°C  
6: -20°C to +70°C    8: 0°C to +50°C

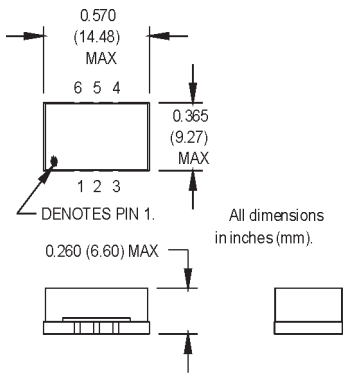
**Stability**  
L: ±4.6 ppm

**Output Type:**  
F: Fixed

**Symmetry/Logic Compatibility**  
A: 40/60 CMOS/TTL    B: 45/55 TTL    C: 45/55 CMOS

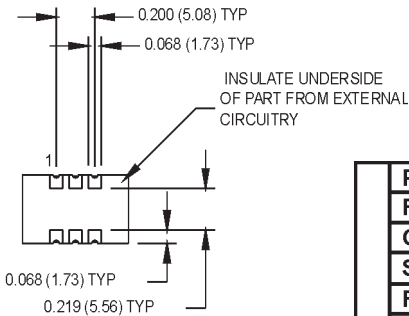
**Package/Lead Configurations**  
K: FR-4, 6 Pad      D: DIP (contact factory)

**Frequency (customer specified)**

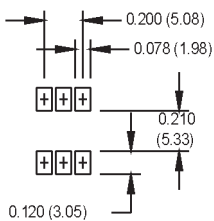


### Pin Connections

FUNCTION	SMT
N/C	1
Tristate	2
Ground/Case	3
Output	4
N/C	5
+Vdd	6



### SUGGESTED SOLDER PAD LAYOUT



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	5		30	MHz	
Operating Temperature	T <sub>A</sub>	(See Ordering Information)				
Storage Temperature	T <sub>S</sub>	-55		+105	°C	
Frequency Stability		(See Ordering Information)				
Aging						See Note 1
1st Year				1.0	ppm	
Thereafter (per year)				0.5	ppm	
Input Voltage	V <sub>dd</sub>	3.15	3.3	3.45	V	M6001
		4.75	5.0	5.25	V	M6002
Input Current	I <sub>dd</sub>			10	mA	M6001
				20	mA	M6002
Output Type						CMOS
Load			15		pF	
Symmetry (Duty Cycle)		(See Ordering Information)				
Logic "1" Level	V <sub>oh</sub>	90 %			V <sub>dd</sub>	
Logic "0" Level	V <sub>ol</sub>			10%	V <sub>dd</sub>	
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>			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	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
	-77	-107	-128	-143	-148	

1. Stability is inclusive of initial calibration, temperature, reflow, supply, load, shock, vibration, and five year aging at 55°C.

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