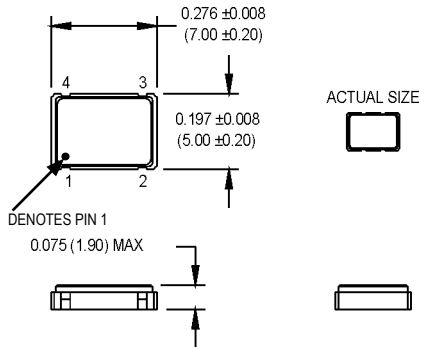
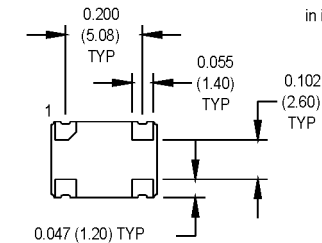


M1 Series

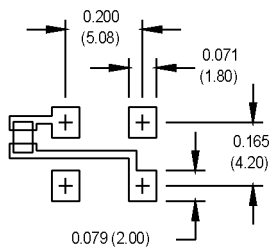
5x7 mm, 5.0 Volt, HCMOS/TTL, Clock Oscillator



All dimensions
in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



NOTE: A capacitor of value 0.01 μF or greater between Vdd and Ground is recommended.

Pin Connections

PIN	FUNCTION
1	N/C or Tristate
2	Ground
3	Output
4	+Vdd

Ordering Information

	M1	1	3	F	A	N	00.0000 MHz
Product Series							
Temperature Range							
1: 0°C to +70°C							
2: -40°C to +85°C							
4: -55°C to +125°C							
6: -20°C to +70°C							
Stability							
3: ±100 ppm							
4: ±50 ppm							
5: ±35 ppm							
6: ±25 ppm							
*8: ±20 ppm							
Output Type							
F: Fixed							
T: Tristate							
Symmetry/Logic Compatibility							
A: 40/60 TTL/HCMOS (50.000 MHz and below)							
C: 45/55 HCMOS							
G: 40/60 HCMOS (50.001 to 100.000 MHz)							
Package/Lead Configurations							
N: Leadless							
Frequency (customer specified)							

*Contact Factory for Availability

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	1.5		100	MHz	
Operating Temperature	T _A	(See ordering information)				
Storage Temperature	T _S	-55		+125	°C	
Frequency Stability	ΔF/F	(See ordering information)				
Aging 1 st Year Thereafter (per year)			3 2		ppm ppm	
Input Voltage	V _{dd}	4.5	5.0	5.5	V	
Input Current 1.500 to 20 MHz 20.001 to 50 MHz 50.001 to 100 MHz	I _{dd}			20 35/45 65	mA mA mA	TTL/HCMOS
Output Type						HCMOS/TTL
Load 1.500 to 50 MHz 50.001 to 67 MHz 67.001 to 100 MHz		10 TTL or 50 pF 50 pF Max 15 pF Max				See Note 1
Symmetry (Duty Cycle)		(See ordering information)				See Note 2
Logic "1" Level	V _{oh}	90% V _{dd} V _{dd} -0.5			V V	HCMOS Load TTL Load
Logic "0" Level	V _{ol}			10% V _{dd} 0.5	V V	HCMOS Load TTL Load
Output Current				±16	mA	
Rise/Fall Time 1.500 to 67 MHz 67.001 to 125 MHz	Tr/Tf			10 3	ns ns	See Note 3
Tristate Function		Input Logic "1" or floating; output active Input Logic "0"; output disables to high-Z				
Start up Time			5		ms	
Random Jitter	Rj		5	12	ps RMS	1-Sigma
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 mS duration, ½ sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
Hermeticity	Per MIL-STD-202, Method 112, (1x10 ⁻⁸ atm. cc/s of Helium)					
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)					
Solderability	Per EIAJ-STD-002					

1. TTL load - See load circuit diagram #1. HCMOS load - See load circuit diagram #2.
2. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with HCMOS load.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with HCMOS load.

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.

MtronPTI Lead Free Solder Profile

