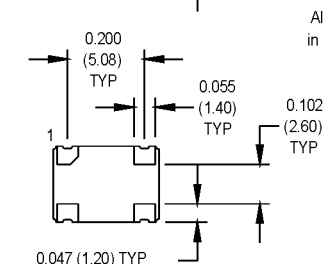
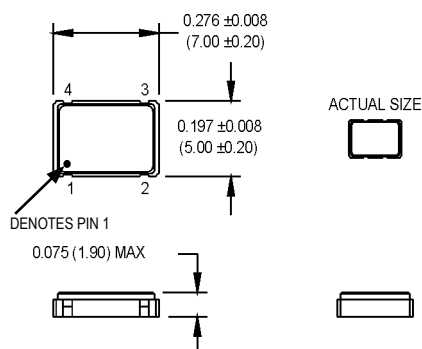
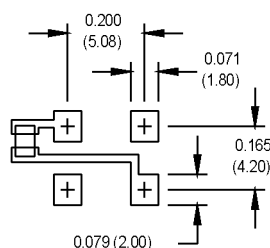


M2 Series

5x7 mm, 3.3 Volt, HCMOS/TTL Compatible Output, Clock Oscillator



SUGGESTED SOLDER PAD LAYOUT



NOTE: A capacitor of value 0.01 μ F 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

	M2	1	3	T	C	N	00.0000 MHz
Product Series							
Temperature Range							
1: 0°C to +70°C		2: -40°C to +85°C					
3: -55°C to +105°C		4: -55°C to +125°C*					
5: 10°C to 125°C		6: -20°C to +70°C					
7: 0°C to 85°C							
Stability							
3: ± 100 ppm		4: ± 50 ppm					
5: ± 35 ppm		6: ± 25 ppm					
*8: ± 20 ppm							
Output Type							
F: Fixed		Q: Standby Function		T: Tristate			
Symmetry/Logic Compatibility							
A or G: 40/60 @ 50% Vdd**							
C: 45/55 HCMOS							
Package/Lead Configurations							
N: Leadless							
Frequency (customer specified)							

*Contact Factory for Availability

** A and G codes are used interchangeably on the M2 Series

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	1.5		135	MHz	See Note 1
Operating Temperature	Ta	(See ordering information)				
Storage Temperature	Ts	-55		+125	°C	
Frequency Stability	$\Delta F/F$	(See ordering information)				
Aging						
1 st Year			± 3		ppm	
Thereafter (per year)			± 2		ppm	
Input Voltage	Vdd	3.0	3.3	3.6	V	
Input Current	Idd			10	mA	1.500 to 20.000 MHz
				20	mA	20.001 to 50.000 MHz
				30	mA	50.001 to 67.000 MHz
				55	mA	67.001 to 135.000 MHz
Standby Current				10	μ A	"Q" Output Type
Output Type						HCMOS/TTL Compatible
Load		2 TTL or 15 pF				See Note 2
Symmetry (Duty Cycle)		(See ordering information)				1/2 Vdd
Logic "1" Level	Voh	90% Vdd			V	HCMOS Load
		Vdd -0.5			V	TTL Load
Logic "0" Level	Vol			10% Vdd	V	HCMOS Load
				0.5	V	TTL Load
Output Current				± 4	mA	
Rise/Fall Time	Tr/Tf			6	ns	See Note 3
				4	ns	1.500 to 50.000 MHz
				2	ns	50.001 to 80.000 MHz
						80.001 to 135.000 MHz
Standby/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		4	10	ps RMS	1-Sigma
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, 1/2 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				
Soldering Conditions		+260°C max. for 10 secs.				

1. Consult factory for availability of higher frequencies.
2. See Load circuit diagram #2. Consult factory with nonstandard output load requirements.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% Vdd and 90% Vdd 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

