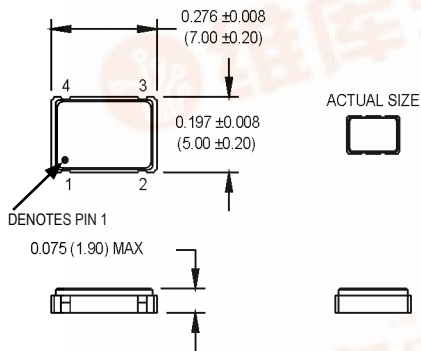


M2 Series

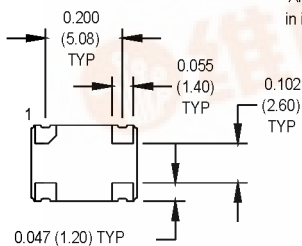
5x7 mm, 3.3 Volt, HCMOS/TTL Compatible Output, Clock Oscillator



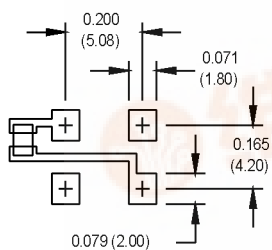
ACTUAL SIZE



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

00.0000
MHz

Product Series — **M2**

Temperature Range — **1**

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**

3: ±100 ppm 4: ±50 ppm
5: ±35 ppm 6: ±25 ppm
*8: ±20 ppm

Output Type — **T**

F: Fixed Q: Standby Function T: Tristate

Symmetry/Logic Compatibility — **C**

A or G: 40/60 @ 50% Vdd**
C: 45/55 HCMOS

Package/Lead Configurations — **N**

N: Leadless

Frequency (customer specified) — **00.0000 MHz**

*Contact Factory for Availability

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

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
	Frequency Range	F	1.5		135	MHz	See Note 1
	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			±3		ppm	
	Thereafter (per year)			±2		ppm	
	Input Voltage	V _{dd}	3.0	3.3	3.6	V	
	Input Current	I _{dd}			10 20 30 55	mA	1,500 to 20,000 MHz 20,001 to 50,000 MHz 50,001 to 67,000 67,001 to 135,000 MHz
	Standby Current				10	μA	"Q" Output Type
	Output Type						HCMOS/TTL Compatible
	Load		2 TTL or 15 pF				See Note 2
	Symmetry (Duty Cycle)		(See ordering information)				½ V _{dd}
	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				±4	mA		
Rise/Fall Time	Tr/Tf			6 4 2	ns ns ns	See Note 3 1,500 to 50,000 MHz 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	
Environmental	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					
	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% V_{DD} and 90% V_{DD} with HCMOS load.

MironPTI 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

