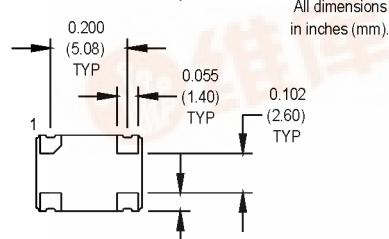
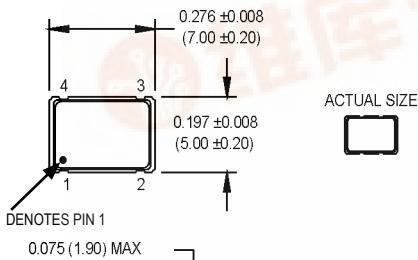
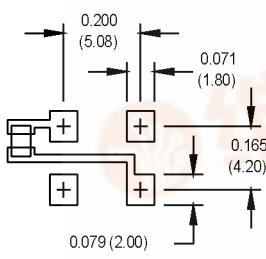


M2 Series

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

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 Thereafter (per year)			±3 ±2		ppm ppm	
Input Voltage	V _{dd}	3.0	3.3	3.6	V	
Input Current	I _{dd}			10 20 30 55	mA mA mA 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	HCMOS Load TTL Load
Logic "0" Level	V _{ol}			10% V _{dd} 0.5	V	HCMOS Load TTL Load
Output Current				±4	mA	
Rise/Fall Time	T _r /T _f			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	R _j		4	10	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 ⁻⁵ 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.

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

