

# M2035, M2036, and M2037 Series

## 5.0 x 7.0 x 1.4 mm, HCMOS Compatible Surface Mount Oscillators

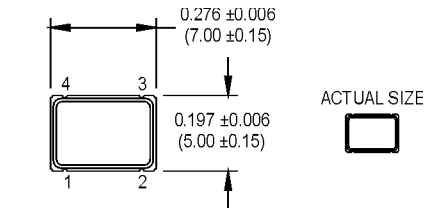


- $\pm 20$  ppm stability
- Tri-state or standby function
- Ideal for WLAN and IEEE802.11 Applications
- Low power applications

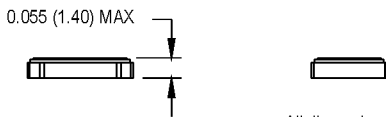


Ordering Information						
	M203X	D	8	Q	C N	00.0000 MHz
Product Series						
M2035 = 2.85V						
M2036 = 3.0V						
M2037 = 3.3V						
Temperature Range						
D: -10°C to +70°C						
6: -20°C to +70°C						
2: -40°C to +85°C						
Stability						
3: $\pm 100$ ppm					4: $\pm 50$ ppm	
6: $\pm 25$ ppm					8: $\pm 20$ ppm*	
Output Type						
Q: Standby Function						
T: Tri-state						
Symmetry/Logic Compatibility						
C: 45/55 HCMOS G: 40/60 HCMOS						
Package/Lead Configurations						
N: Leadless						
Frequency (customer specified)						

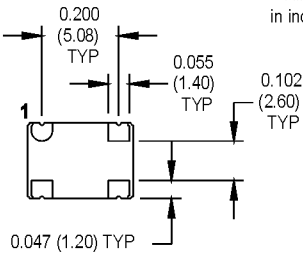
\*-10°C to +70°C only



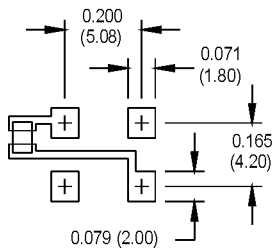
ACTUAL SIZE



All dimensions in inches (mm).



### SUGGESTED SOLDER PAD LAYOUT



### Pin Connections

PIN	FUNCTION
1	Tri-state/Standby
2	Ground
3	Output
4	+Vdd

	Electrical Specifications					
	PARAMETER	Symbol	Min.	Typ.	Max.	Units Condition
	Frequency Range	F	1.5		125	MHz See Note 1
	Frequency Stability	$\Delta F/F$			$\pm 20$	ppm See Note 2
	Operating Temperature	T <sub>A</sub>	(See Ordering Information)			
	Input Voltage	V <sub>dd</sub>	3.15 2.85 2.7	3.3 3.0 2.85	3.45 3.15 3.0	V V V 3.3V 3.0V 2.85V
	Input Current	I <sub>dd</sub>			15 20 30 55	mA mA mA mA 3.3V
	1.500 to 20.000 MHz					
	20.001 to 50.000 MHz					
	50.001 to 67.000 MHz					
	67.001 to 125.000 MHz					
	Symmetry (Duty Cycle)		45		55	% ½ V <sub>dd</sub>
	Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>			4 6	ns ns See Note 2 10% to 90% V <sub>dd</sub> 10% to 90% V <sub>dd</sub>
	80.000 MHz					
	22.000 to 44.000 MHz					
	Logic "1" Level	V <sub>oh</sub>	90% V <sub>dd</sub>			V
	Logic "0" Level	V <sub>ol</sub>			10% V <sub>dd</sub>	V
	Output Current	I <sub>oh</sub>	-2			mA
		I <sub>ol</sub>	+2			mA
	Output Load				15	pF
	Start-up Time				5	ms
	Standby Current				10	μA
	Tri-State/Standby Function	Pin 1 high or floating: clock signal output Pin 1 low: output disables to high impedance				
	Output Disable Time				150	ns
	Output Enable Time				5	ms
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C				
	Vibration	Per MIL-STD-202, Method 201 & 204				
	Reflow Solder Conditions	+260°C for 10 seconds max.				
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 <sup>-3</sup> atm.cc/s of helium)				
	Solderability	Per EIAJ-STD-002				

1. Consult factory for available frequencies in this range
2. Inclusive of calibration, deviation over temperature, supply voltage change, load change, shock, vibration,

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# MtronPTI Lead Free Solder Profile

