

# M2035, M2036, and M2037 Series

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

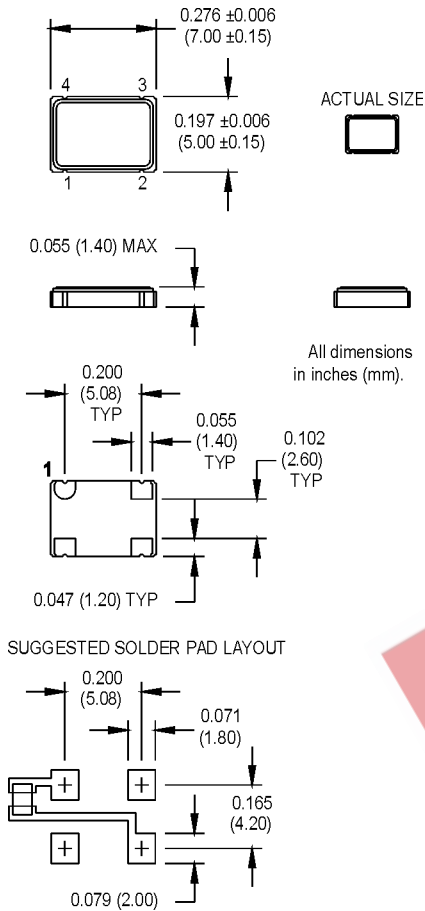


- $\pm 20$  ppm stability
- Tri-state or standby function
- Ideal for WLAN and IEEE802.11 Applications
- Low power applications



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



### Pin Connections

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
	Electrical Specifications	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	3.3	3.45	V	3.3V
				2.85	3.0	3.15	V	3.0V
				2.7	2.85	3.0	V	2.85V
Input Current		I <sub>dd</sub>	1.500 to 20.000 MHz			15	mA	3.3V
			20.001 to 50.000 MHz			20	mA	
			50.001 to 67.000 MHz			30	mA	
			67.001 to 125.000 MHz			55	mA	
Symmetry (Duty Cycle)				45		55	%	1/2 V <sub>dd</sub>
Rise/Fall Time		T <sub>r</sub> /T <sub>f</sub>	80.000 MHz			4	ns	See Note 2 10% to 90% V <sub>dd</sub>
			22.000 to 44.000 MHz			6	ns	10% to 90% V <sub>dd</sub>
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>-6</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

