

M2035, M2036, and M2037 Series

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

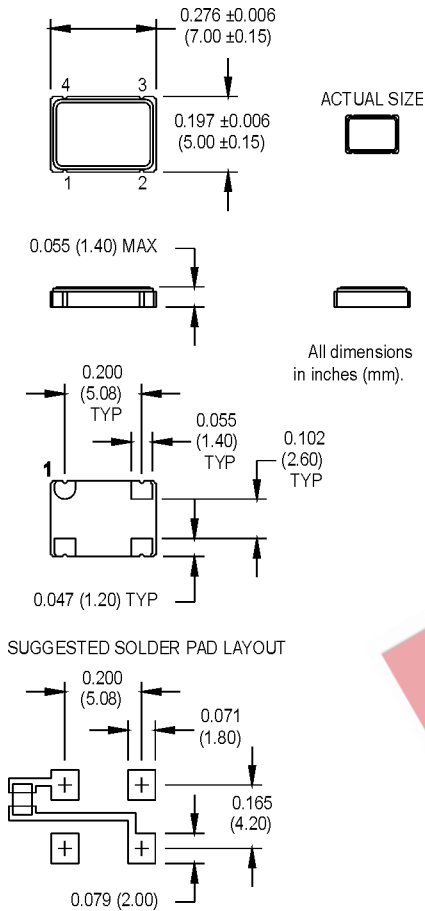


- ± 20 ppm stability
- Tri-state or standby function
- Ideal for WLAN and IEEE802.11 Applications
- Low power applications



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: ± 100 ppm 4: ± 50 ppm 6: ± 25 ppm 8: ± 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	$\Delta F/F$			± 20	ppm	See Note 2	
	Operating Temperature	T _A	(See Ordering Information)					
	Input Voltage	V _{dd}		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 _{dd}	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	%	$\frac{1}{2}$ V _{dd}	
	Rise/Fall Time	Tr/Tf	80.000 MHz			4	ns	See Note 2 10% to 90% V _{dd}
			22.000 to 44.000 MHz			6	ns	10% to 90% V _{dd}
	Logic "1" Level	V _{oh}	90% V _{dd}				V	
	Logic "0" Level	V _{ol}			10% V _{dd}		V	
	Output Current	I _{oh}	-2				mA	
		I _{ol}	+2				mA	
Output Load				15		pF		
Start-up Time				5		ms		
Standby Current				10		μ A		
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 ⁻⁶ 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

