

M2032, M2033, and M2034 Series

3.2 x 5.0 x 1.3 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
M2032 = 2.85V
M2033 = 3.0V
M2034 = 3.3V

Temperature Range
D: -10°C to +70°C
6: -20°C to +70°C
2: -40°C to +85°C

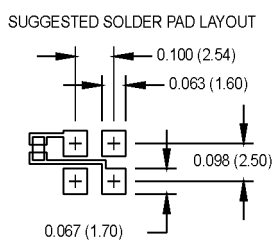
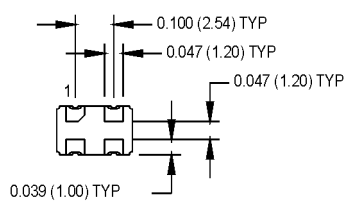
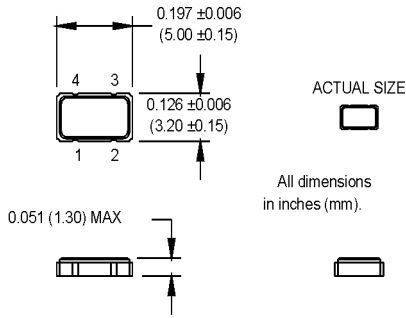
Stability
3: ± 100 ppm 4: ± 50 ppm
6: ± 25 ppm 8: ± 20 ppm **

Output Type
Q: Standby Function T: Tristate

Symmetry/Logic Compatibility
C: 45/55 CMOS G: 40/60 CMOS

Package/Lead Configurations
N: Leadless

Frequency (customer specified)



Pin Connections

PIN	Function
1	Standby/Tristate
2	Ground
3	Output
4	+Vdd

PARAMETER	Symbol	Min.	Typ.	Max.	Units.	Condition
Frequency Range	F	1.5		80	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 2.85 2.7	3.3 3.0 2.85	3.45 3.15 3.0	V V V	3.3V 3.0V 2.8V
Input Current	I _{dd}			15 20 45	mA mA mA	3.3V
Input Frequency		1.500 to 20.000 MHz 20.001 to 50.000 MHz 50.001 to 80.000 MHz				
Symmetry (Duty Cycle)		45		55	%	1/2 V _{dd}
Rise/Fall Time	T _r /T _f			6 4	ns ns	10% to 90% V _{dd} 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} I _{ol}	-2 +2			mA mA	
Output Load				15	pF	
Start-up Time				5	ms	
Standby Current				10	ms	
Standby/Tristate 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	240°C for 10 s max					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ 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, and 10 years aging

MtronPTI Lead Free Solder Profile

