

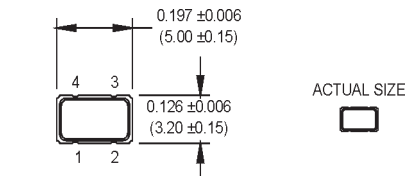
# M2032, M2033, and M2034 Series 3.2 x 5.0 x 1.3 mm HCMOS Compatible Surface Mount Oscillators



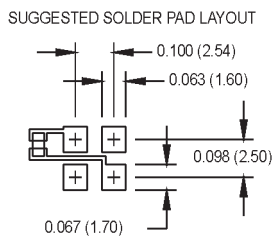
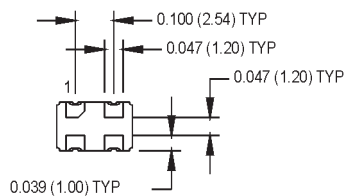
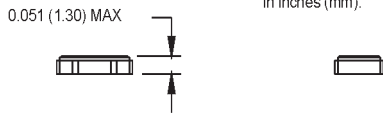
- $\pm 20$  ppm stability
- Tri-state or standby function
- Ideal for WLAN and IEEE802.11 Applications
- Low power applications



Ordering Information		00.0000 MHz	
<b>Product Series</b>	M203X	D	8 Q C N
M2032 = 2.85V			
M2033 = 3.0V			
M2034 = 3.3V			
<b>Temperature Range</b>			
D: -10°C to +70°C			
6: -20°C to +70°C			
2: -40°C to +85°C			
<b>Stability</b>			
3: $\pm 100$ ppm	4: $\pm 50$ ppm		
6: $\pm 25$ ppm	8: $\pm 20$ ppm **		
<b>Output Type</b>			
Q: Standby Function	T: Tristate		
<b>Symmetry/Logic Compatibility</b>			
C: 45/55 CMOS	G: 40/60 CMOS		
<b>Package/Lead Configurations</b>			
N: Leadless			
<b>Frequency (customer specified)</b>			



ACTUAL SIZE  
All dimensions in inches (mm).



## Pin Connections

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units.	Condition	
Electrical Specifications	Frequency Range	F	1.5		80	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	2.8V
	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 80.000 MHz			45	mA	
	Symmetry (Duty Cycle)		45		55	%	1/2 V <sub>dd</sub>	
	Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>	22.000 to 44.000 MHz			6	ns	10% to 90% V <sub>dd</sub>
			80.000 MHz			4	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		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 <sup>-5</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, and 10 years aging

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