

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 5: ± 35 ppm
6: ± 25 ppm 8: ± 20 ppm **

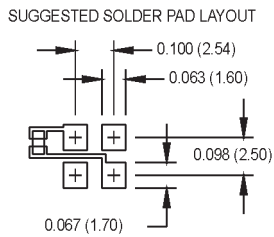
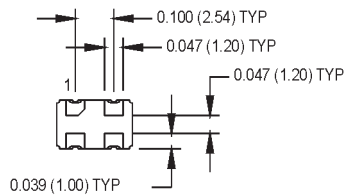
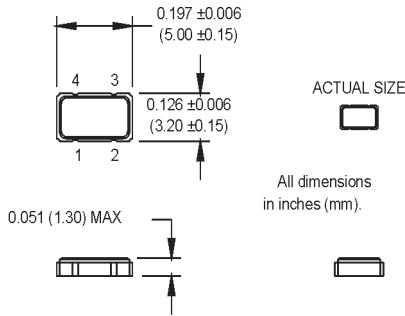
Output Type
Q: Standby Function T: Tristate

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

Package/Lead Configurations
N: Leadless

Frequency (customer specified)

M2034S021 datasheet - Contact Factory
** -10°C to +70°C only



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
1.500 to 20.000 MHz 20.001 to 50.000 MHz 50.001 to 80.000 MHz						
Symmetry (Duty Cycle)		45		55	%	$\frac{1}{2}$ V _{dd}
Rise/Fall Time	T _r /T _f			6 4	ns ns	10% to 90% V _{dd} 10% to 90% V _{dd}
22.000 to 44.000 MHz 80.000 MHz						
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	10	ms	
Standby Current				10	μ A	
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	+260°C for 10 seconds maximum					
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁵ 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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MtronPTI Lead Free Solder Profile



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