

# 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

**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:  $\pm 100$  ppm    4:  $\pm 50$  ppm    5:  $\pm 35$  ppm  
6:  $\pm 25$  ppm    8:  $\pm 20$  ppm \*\*

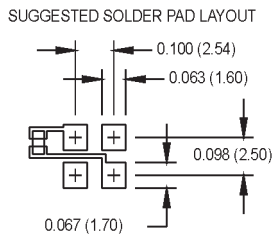
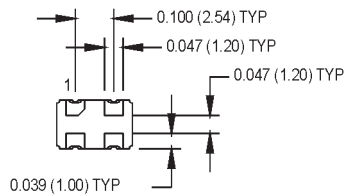
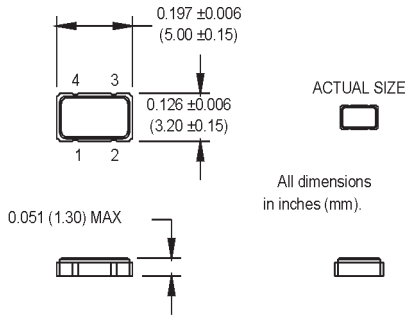
**Output Type**  
Q: Standby Function    T: Tristate

**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	$\Delta F/F$			$\pm 20$	ppm	See Note 2
Operating Temperature	T <sub>A</sub>	(See Ordering Information)				
Input Voltage	V <sub>dd</sub>	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 <sub>dd</sub>			15 20 45	mA mA mA	3.3V
Symmetry (Duty Cycle)		45		55	%	1/2 V <sub>dd</sub>
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>			6 4	ns ns	10% to 90% V <sub>dd</sub> 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> I <sub>ol</sub>	-2 +2			mA mA	
Output Load				15	pF	
Start-up Time			5	10	ms	
Standby Current				10	$\mu$ 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	
<b>Environmental</b>						
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 <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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# MtronPTI Lead Free Solder Profile



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