

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



- ± 20 ppm stability
- Standby function
- Ideal for WLAN and IEEE802.11 Applications

Ordering Information

00.0000 MHz

M203X D 8 Q C N

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 **

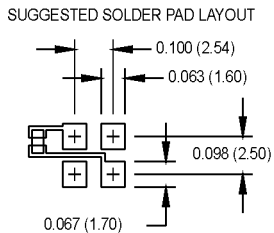
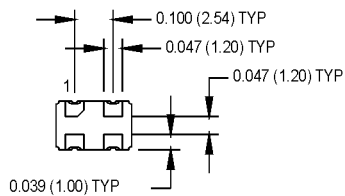
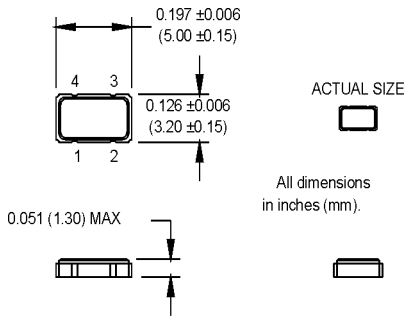
Output Type
 Q: Standby Function

Symmetry/Logic Compatibility
 C: 45/55 CMOS

Package/Lead Configurations
 N: Leadless

Frequency (customer specified)

** -10° to +70° only



Pin Connections

PIN	FUNCTION
1	Standby
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	-10		+70	°C	
Input Voltage	V _{dd}	3.15 2.85 2.7	3.3 3.0 2.85	3.45 3.15 3.0	V	3.3V 3.0V 2.85V
Input Current	I _{dd}			15 20 45	mA	3.3 V
						1.500 to 20.000 MHz 20.001 to 50.000 MHz 50.001 to 80.000 MHz
Symmetry (Duty Cycle)		45		55	%	½ V _{dd}
Rise/Fall Time	T _r /T _f			6 4	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}	-2			mA	
	I _{ol}	+2			mA	
Output Load				15	pF	
Start-up Time				5	ms	
Standby Current				10	µA	
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	240°C for 10 s max.				
	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.

M-tron reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of such product.

M-tron Industries, Inc., PO Box 630, Yankton, SD 57078-0630, USA Phone: 605-665-9321 or 1-800-762-8800 Fax: 605-665-1709 Website: www.mtron.com
 M-tron Industries Limited, 1104 Shanghai Industrial Investment Building, 48-62 Hennessy Road, Wanchai, Hong Kong, China Phone: 852-2866-8023 Fax: 852-2529-1822

Revised 8/14/03