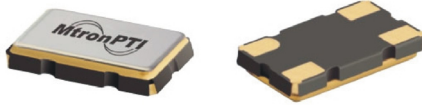


# PP Surface Mount Crystals

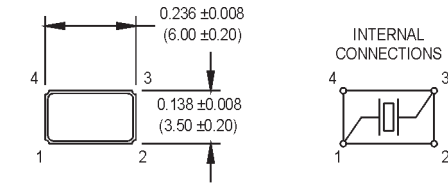
## 3.5 x 6.0 x 1.2 mm



### Ordering Information

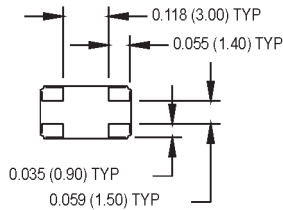
Product Series	PP	1	M	M	XX	00.0000 MHz
Temperature Range	1: 0°C to +70°C		2: -10°C to +60°C			
	3: -20°C to +70°C		4: -30°C to +60°C			
	5: -20°C to +80°C		6: -40°C to +85°C			
Tolerance	D: ±10 ppm	J: ±30 ppm				
	F: ±15 ppm	M: ±50 ppm				
	G: ±20 ppm	H: ±25 ppm				
Stability	C: ±5 ppm		D: ±10 ppm			
	F: ±15 ppm		G: ±20 ppm			
	H: ±25 ppm		J: ±30 ppm			
	M: ±50 ppm		P: ±100 ppm			
Load Capacitance	Blank: 18 pF (std)					
	S: Series Resonant					
	XX: Customer Specified 10 pF to 32 pF					
Frequency (customer specified)						

M1003Sxxx - Contact factory for datasheet.



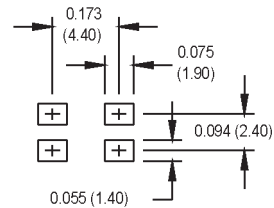
All dimensions in inches (mm).

0.047 (1.20) MAX



ACTUAL SIZE

#### SUGGESTED SOLDER PAD LAYOUT



### Available Stabilities vs. Temperature

T \ S	C	D	F	G	J	M
1	N	A	A	A	A	A
2	A	A	A	A	A	A
3	N	A	A	A	A	A
4	N	N	N	N	A	A
5	N	N	N	N	A	A
6	N	N	N	A	A	A

A = Available  
N = Not Available

### Electrical/Environmental Specifications

PARAMETERS	VALUE
Frequency Range*	10.000 to 180.000 MHz
Tolerance @ +25°C	See ordering information
Stability	See ordering information
Aging	±2 ppm/yr. Max.
Shunt Capacitance	5 pF Max.
Load Capacitance	See ordering information
Standard Operating Conditions	See ordering information
Storage Temperature	-40°C to +85°C
Equivalent Series Resistance (ESR), Max.	
Fundamental (AT-cut)	
10.000 to 12.999 MHz	80 Ω Max.
13.000 to 13.999 MHz	50 Ω Max.
14.000 to 19.999 MHz	40 Ω Max.
20.000 to 45.000 MHz	30 Ω Max.
Third Overtones (AT-cut)	
40.000 to 150.000 MHz	50 Ω Max.
Fifth Overtones (AT-cut)	
100.000 to 180.000 MHz	90 Ω Max.
Drive Level	100 μW Max.
Mechanical Shock	MIL-STD-202, Method 213, C
Vibration	MIL-STD-202, Method 201 & 204
Thermal Cycle	MIL-STD-883, Method 1010, B

\*Because this product is based on AT-strip technology, not all frequencies in the range stated are available. Contact the factory for availability of specific frequencies.

MtronPTI 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.

Please see [www.mtronpti.com](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

# MtronPTI Lead Free Solder Profile

