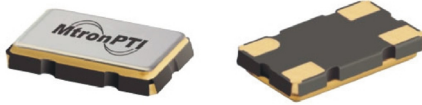


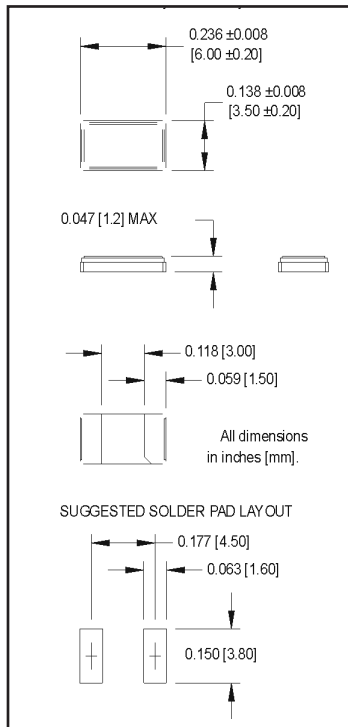
PP & PR Surface Mount Crystals

3.5 x 6.0 x 1.2 mm

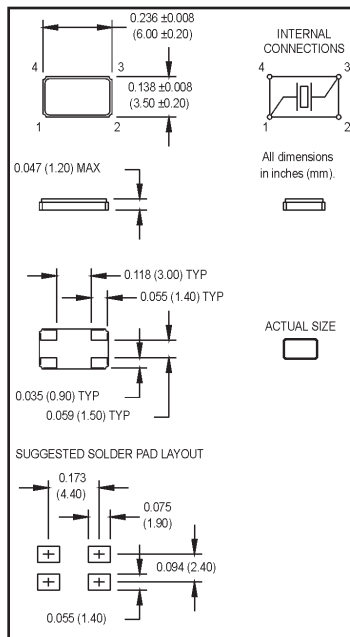


- Miniature low profile package (2 & 4 Pad)
- RoHS Compliant
- Wide frequency range
- PCMCIA - high density PCB assemblies

PR (2 Pad)



PP (4 Pad)



Ordering Information

Product Series	PP	1	M	M	XX	00.0000
Temperature Range						MHz
Tolerance						
Stability						
Load Capacitance						

Product Series
 PP: 4 Pad
 PR: 2 Pad

Temperature Range
 1: 0°C to +70°C
 3: -10°C to +60°C
 6: -20°C to +70°C
 2: -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 & M1005Sxxx - Contact factory for datasheet.

Available Stabilities vs. Temperature

T \ S	D	F	G	H	J	M
1	A	A	A	A	A	A
2	N	N	A	A	A	A
3	A	A	A	A	A	A
6	N	N	A	A	A	A

A = Available
N = Not Available

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
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, 50 μW Typ, 10 μW Min
Mechanical Shock	MIL-STD-202, Method 213, C
Vibration	MIL-STD-202, Method 201 & 204
Thermal Cycle	MIL-STD, Method 1010, B
Max Soldering Conditions	See solder profile, Figure 1

* Because this product is based on AT-strip technology, not all frequencies in the range stated are available. Contact the factory for availability of frequencies > 100 MHz.

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MtronPTI Lead Free Solder Profile



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