

# M1253 Surface Mount Crystal

## 2.5 x 3.2 x 0.65 mm



### Features:

- Ultra-Miniature Size
- Tape & Reel
- Leadless Ceramic Package - Seam Sealed

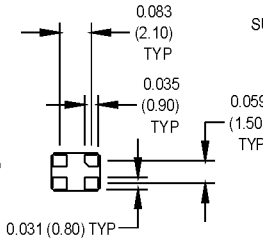
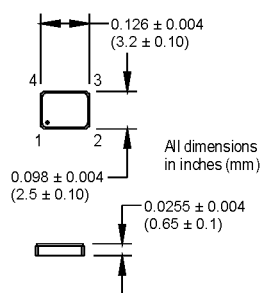
### Applications:

- Handheld Electronic Devices
- PDA, GPS, MP3
- Portable Instruments
- PCMCIA Cards
- Bluetooth

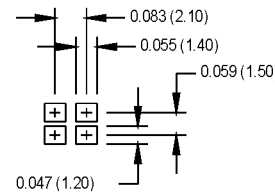


### Ordering Information

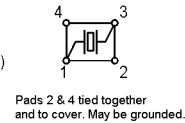
	M1253	6	J	M	XX	00.0000 MHz
Product Series						
Operating Temperature						
2: -40°C to +85°C						
6: -20°C to +70°C						
Tolerance @ +25°C						
D: ±10 ppm			J: ±30 ppm (std)			
E: ±15 ppm			M: ±50 ppm			
G: ±20 ppm			P: ±100 ppm			
H: ±25 ppm						
Stability						
D: ±10 ppm			J: ±30 ppm			
E: ±15 ppm			M: ±50 ppm (std)			
G: ±20 ppm			P: ±100 ppm			
H: ±25 ppm						
Load Capacitance						
Blank: 18 pF (std)						
S: Series Resonant						
XX: Customer Specified 8 pF to 32 pF						
Frequency (customer specified)						



### SUGGESTED SOLDER PAD LAYOUT



### INTERNAL CONNECTIONS



Electrical Specifications	Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
	Frequency Range	F	13		54	MHz	
	Frequency Tolerance	F/F	See Ordering Information			ppm	+25°C
	Frequency Stability	F/F	See Ordering Information			ppm	Over Operating Temperature
	Operating Temperature	T <sub>opr</sub>	See Ordering Information			°C	
	Storage Temperature	T <sub>stg</sub>	-55		+125	°C	
	Aging	F <sub>a</sub>			±5	ppm/yr	+25°C
	Load Capacitance	C <sub>L</sub>					See Ordering Information
	Shunt Capacitance	C <sub>0</sub>			3	pF	
	ESR						
	Fundamental AT-Cut Frequencies						
	13.000000 to 19.999999 MHz				80	Ohms	All
	20.000000 to 29.999999 MHz				70	Ohms	All
	30.000000 to 54.000000 MHz				50	Ohms	All
Environmental	Drive Level	D <sub>L</sub>	10	100	300	μW	
	Insulation Resistance	I <sub>R</sub>	500			Megohms	100 VDC
	Aging	Internal Specification					168 hrs. at +55°C
	Physical Dimensions	MIL-STD-883, Method 2016					
	Shock	MIL-STD-202, Method 213 Condition C					100 g
	Vibration	MIL-STD-202, Methods 201 & 204					10 g from 10-2000 Hz
	Thermal Cycle	MIL-STD-883, Method 1010, Condition B					-55°C to +125°C
	Gross Leak	MIL-STD-202, Method 112					30 sec. Immersion
	Fine Leak	MIL-STD-202, Method 112					1 x 10 <sup>-8</sup> atmcc/sec. min.
	Resistance to Solvents	MIL-STD-883, Method 2015					Three 1 minute soaks

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.

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## MtronPTI Lead Free Solder Profile

