

# M1253 Surface Mount Crystal

## 2.5 x 3.2 x 0.65 mm

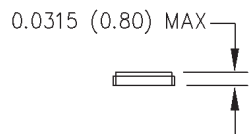


### Features:

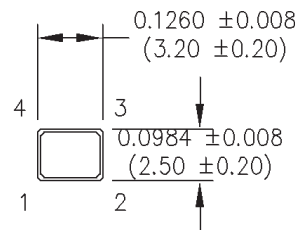
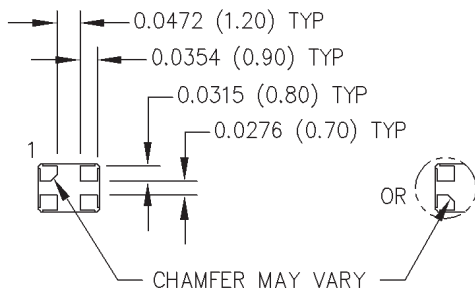
- Ultra-Miniature Size
- Tape & Reel
- Leadless Ceramic Package - Seam Sealed

### Applications:

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

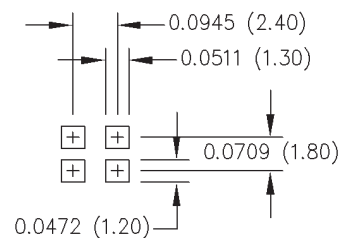


All dimensions in inches (mm).



(2 & 4 connected thru metal cover)

### SUGGESTED SOLDER PAD LAYOUT



### Ordering Information

**00.0000**  
**MHz**

**M1253      6      J      M      XX**

**Product Series** \_\_\_\_\_

**Operating Temperature** \_\_\_\_\_

1: -10°C to +70°C      3: -10°C to +60°C

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)** \_\_\_\_\_

M1253Sxxx - Contact factory for datasheet.

	Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions	
Electrical Specifications	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	
	Drive Level	D <sub>L</sub>	10	100	300	µW		
	Insulation Resistance	I <sub>R</sub>	500			Megohms	100 VDC	
Environmental	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
	Max Soldering Conditions	See solder profile, Figure 1						

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

