

# M1253 Surface Mount Crystal

## 2.5 x 3.2 x 0.8 mm

### Features:

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

### Applications:

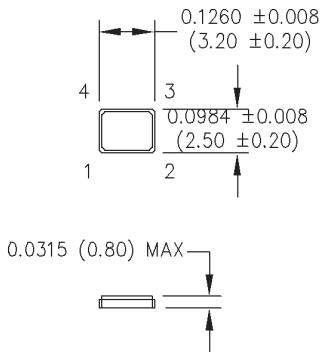
- Handheld Electronic Devices
- PDA, GPS, MP3
- Portable Instruments
- PCMCIA Cards
- Bluetooth



### Ordering Information

Product Series	M1253	6	J	M	XX	00.0000
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)						

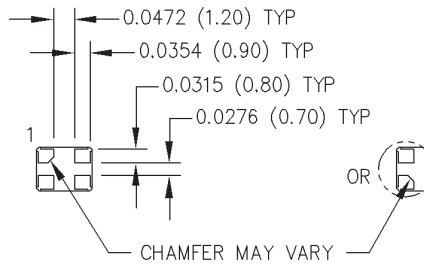
M1253Sxxx - Contact factory for datasheet.



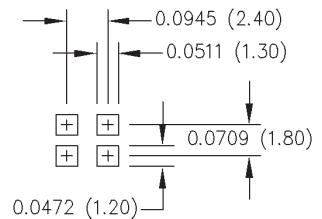
(TOP VIEW)  
INTERNAL  
CONNECTIONS

(2 & 4 connected  
thru metal cover)

All dimensions  
in inches (mm).



SUGGESTED SOLDER PAD LAYOUT



	Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Electrical Specifications	Frequency Range	F	12		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 Lead Free Solder Profile

