

# M1253 Surface Mount Crystal

## 2.5 x 3.2 x 0.65 mm



### Features:

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

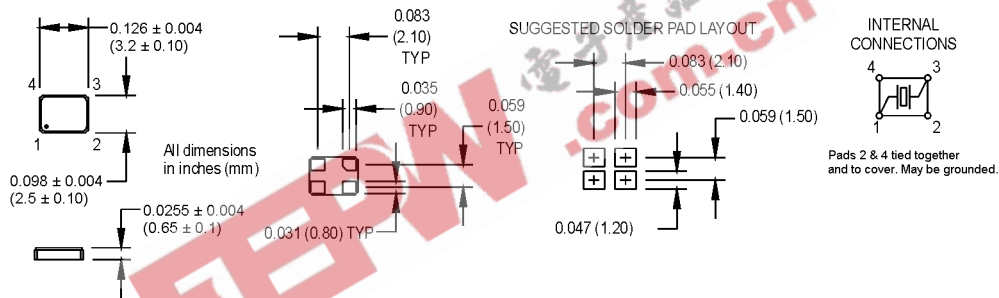


### Applications:

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

### Ordering Information

	<b>M1253</b>	<b>6</b>	<b>J</b>	<b>M</b>	<b>XX</b>	<b>00.0000</b>
<b>Product Series</b>						
<b>Operating Temperature</b>	3:-10°C to +60°C					
<b>2:</b>	-40°C to +85°C					
<b>6:</b>	-20°C to +70°C					
<b>Tolerance @ +25°C</b>						
<b>D:</b>	±10 ppm					
<b>E:</b>	±15 ppm					
<b>G:</b>	±20 ppm					
<b>H:</b>	±25 ppm					
<b>J:</b>	±30 ppm (std)					
<b>M:</b>	±50 ppm					
<b>P:</b>	±100 ppm					
<b>Stability</b>						
<b>D:</b>	±10 ppm					
<b>E:</b>	±15 ppm					
<b>G:</b>	±20 ppm					
<b>H:</b>	±25 ppm					
<b>J:</b>	±30 ppm					
<b>M:</b>	±50 ppm (std)					
<b>P:</b>	±100 ppm					
<b>Load Capacitance</b>						
<b>Blank:</b>	18 pF (std)					
<b>S:</b>	Series Resonant					
<b>XX:</b>	Customer Specified 8 pF to 32 pF					
<b>Frequency (customer specified)</b>						



	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	

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# MtronPTI Lead Free Solder Profile

