

# M1253 Surface Mount Crystal

## 2.5 x 3.2 x 0.65 mm



### Features:

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

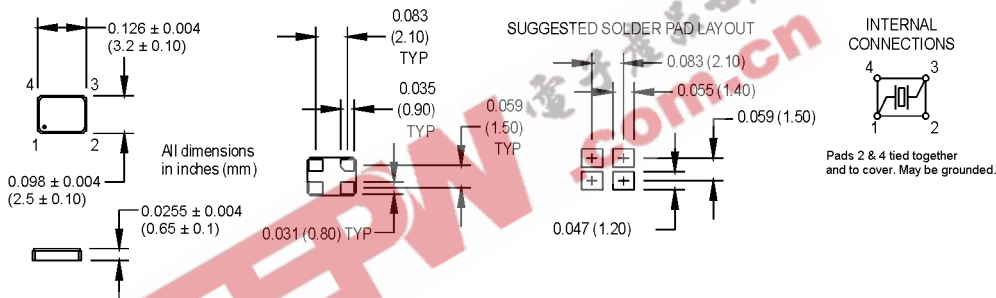


### Applications:

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

### Ordering Information

Product Series	M1253	1	J	M	XX	00.0000
Operating Temperature	1: -10°C to +70°C (std)	2: -40°C to +85°C	3: -10°C to +60°C	6: -20°C to +70°C		MHz
Tolerance @ +25°C	D: ±10 ppm	E: ±15 ppm	G: ±20 ppm	H: ±25 ppm	J: ±30 ppm (std)	M: ±50 ppm
Stability	D: ±10 ppm	E: ±15 ppm	G: ±20 ppm	H: ±25 ppm	J: ±30 ppm	M: ±50 ppm (std)
Load Capacitance	Blank: 18 pF (std)	S: Series Resonant	XX: Customer Specified 8 pF to 32 pF			
Frequency (customer specified)						



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
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>-18</sup> atmcc/sec. min.
Resistance to Solvents	MIL-STD-883, Method 2015					Three 1 minute soaks
Reflow Solder Conditions	MIL-STD-202, Method 210, Condition C					Pb Free = +260°C for 10 secs. max

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