MtronPTI
...when timing matters

M1252 Series
SPECIFICATION FOR 2.5x2.0 mm AT CUT SMT CRYSTAL

FEATURES

Surface mount AT-cut crystal
Compliant to RoHS directive

APPLICATIONS

Clock circuits in communications equipment
Test equipment
Portable and wearable devices.

Ordering Information:

Product Family	Temperature Range		Tolerance at +25 °C		Stability		Load Capacitance		Frequency
	Code	Value	Code	Value	Code	Value	Code	Value	
M1252	6 2	-20 °C to +70 °C -40 °C to +85 °C	D E G H J M	±10 ppm ±15 ppm ±20 ppm ±25 ppm ±30 ppm ±50 ppm	D E G H J M	±10 ppm ±15 ppm ±20 ppm ±25 ppm ±30 ppm ±50 ppm	Blank S xx	18 pF (standard) Series Resonant Customer Specified (6 pF to 50 pF)	XXX.XXXXXX MHz
Example: M12526JM 25.000000 MHz									
M1252	**6**		**J**		**M**				**25.000000 MHz**

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Mode of Oscillation		Fundamental (AT cut)				
Frequency Range	F_O	12.000		54.000	MHz	
Frequency Tolerance	ΔF/F	See Ordering Information Table			ppm	@ +25 °C
Frequency Stability	ΔF/F	See Ordering Information Table			ppm	Ref to +25 °C
Operating Temperature	T_A	See Ordering Information Table			°C	
Aging		-3		+3	ppm/year	@ +25 °C
Load Capacitance	C_L	See Ordering Information Table (standard is 18 pF)			pF	
Resistance	R_s			100	Ω	12.000 – 15.999 MHz
				80	Ω	16.000 – 26.999 MHz
				50	Ω	27.000 – 35.000 MHz
				40	Ω	35.001 – 54.000 MHz
Shunt Capacitance	C_O			5	pF	
Drive Level	D_L			100	µW	
Insulation Resistance		500			MΩ	Tested @ 100VDC

Environmental & Package Specifications:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)
Gross Leak	Per MIL-STD-202, Method 112 (30 sec. Immersion)
Fine Leak	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)
Resistance to Solvents	Per MIL-STD-883, Method 2015
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package	2.5 x 2.0 mm ceramic leadless 4 pad package

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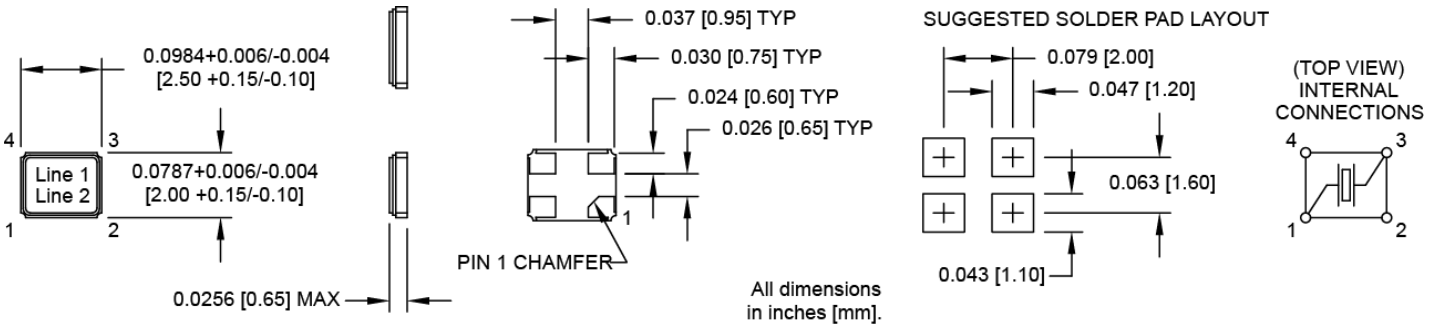
Marking:

Part Marking	
Line 1	xxMxxx
Line 2	M Y WW V

Legend	
M	MtronPTI
Y	Year
WW	Week
V	Vendor

Dimensions:



Reflow Soldering Conditions:

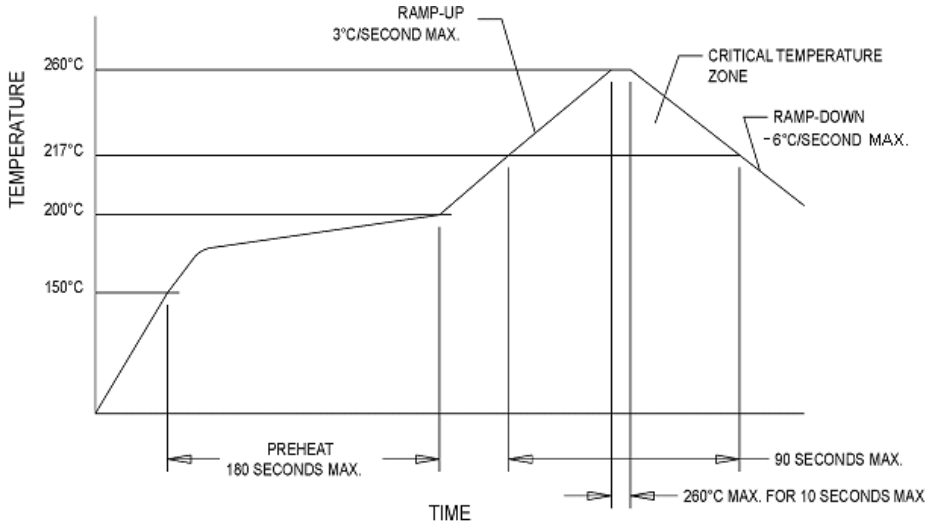


Figure 1

M1252 Series
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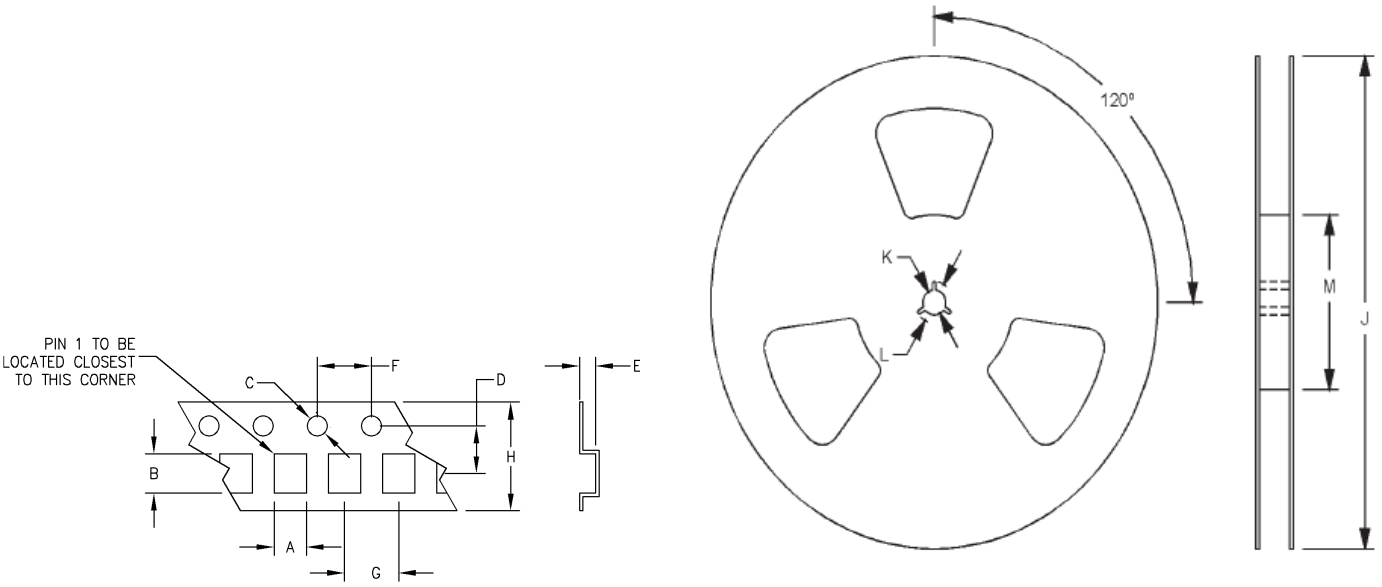
Tape and Reel Specifications:



All dimensions are in mm.

A	B	C	D	E	F	G	H	J	K	L	M
2.4	2.9	1.55	3.5	1.2	4	4	8	178	13	21	60