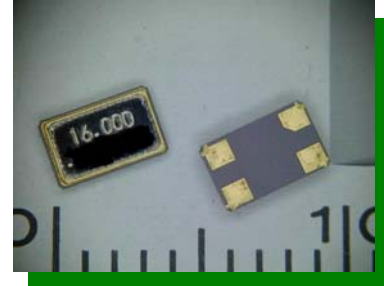


## Microprocessor Crystal Unit 4.0 x 2.5mm Surface Mount Package



### Features

- Seam Seal
- Excellent Solderability
- High Frequency Stability
- Excellent Thermal Hysteresis
- Excellent Vibration Resistance & Shock Resistance
- RoHS Compliant



### Electrical Specifications

Frequency Range		12.000 to 52.000	MHz
Mode of Oscillation	Fundamental	12.000 to 52.000	
Frequency Tolerance at 25°C	Standard	±30	PPM Max
	Optional	± 25 to ±10	
Frequency Stability over Temperature Range	Standard	±50	
	Optional	±30 to ±10	
Operating Temperature Range	Standard	-10 to +70	°C
	Extended	-40 to +85	
Storage Temperature Range		-55 to +125	
Aging		±3	PPM Max/Year
Load Capacitance		10 to 32 or Series Resonance	pF
Shunt Capacitance		5.0	pF
Equivalent Ser Resistance (ESR)		See ESR Table	Ohms
Drive Level		100	uW Typ
Insulation Resistance		500 at 100Vdc (±15Vdc)	M Ohm

### Frequency Range vs. ESR Values

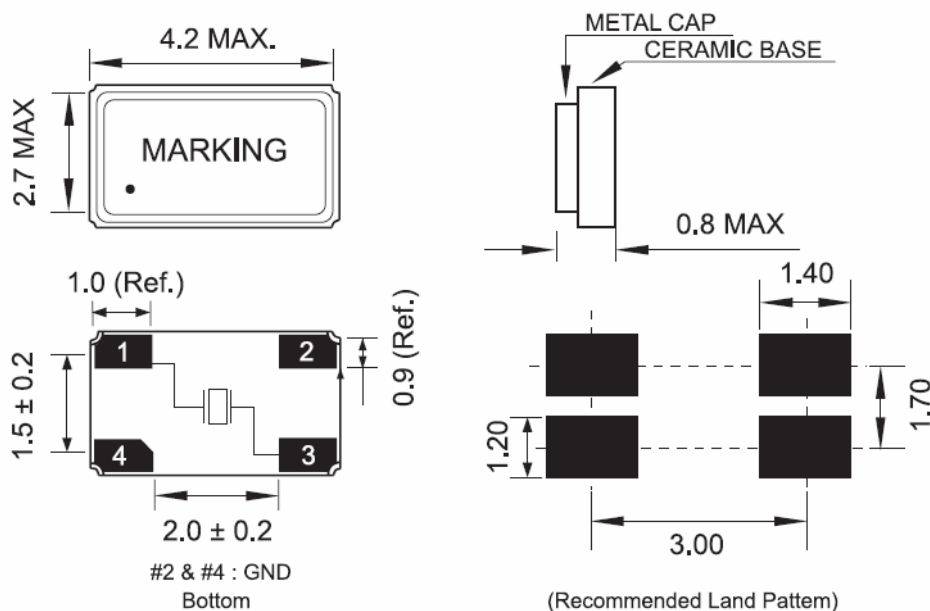
Frequency Range in MHz	ESR Ohms Max
12.000 to 15.000	80
15.100 to 20.000	60
20.100 to 30.000	40
30.100 to 52.000	30

### Part Numbering System

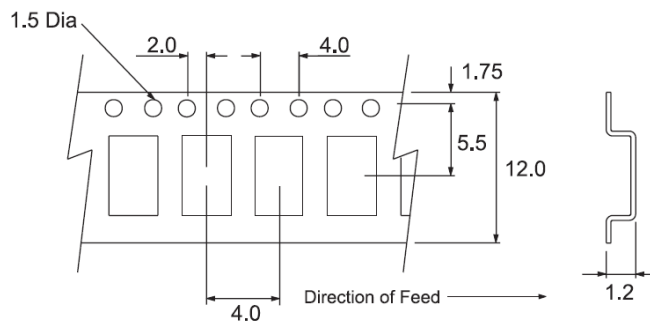
Type	Frequency	Load Capacitance	Tolerance/ Stability(*1)	Extended Temperature(*1)	Tape & Reel
WSC40	in MHz	10 to 32 for Parallel or S for Series	(PPM/PPM) e.g. 1020, 1010	EXT	TR

Examples : WSC40-22.000-18-TR or WSC40-52.000-S-1010-EXT-TR

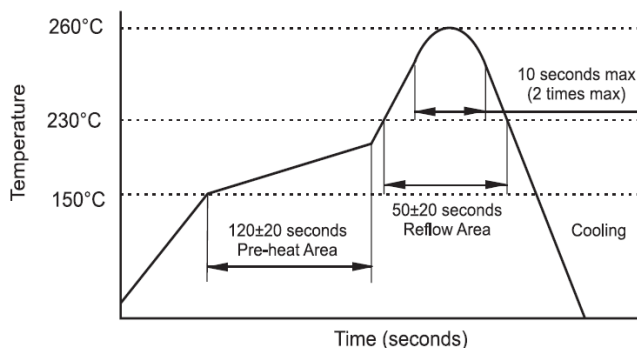
### Mechanical Outline



### Carrier Tape Dimensions



### Solder Reflow Characteristics



#### Notes:

- 1 - Standard Tolerance/Stability and Standard Temperature Range, do not need to be included in Part Number description.
- 2 - Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
- 3 - Specification subject to change without notice.