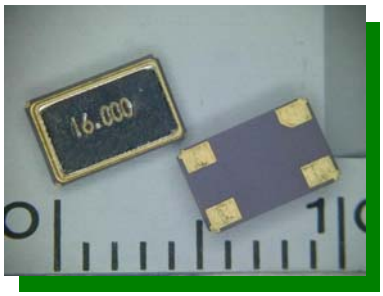
# WSC50

Wavetron

## Microprocessor Crystal Unit
## 5.0 x 3.2mm Surface Mount Package

Pb RoHS Compliant




## Features

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

## Electrical Specifications

| | | | |
|---|---|---|---|
| Frequency Range | | 8.000 to 150.000 | MHz |
| Mode of Oscillation | Fundamental | 8.000 to 52.000 | |
| | Third Overtone | 40.000 to 150.000 | |
| 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 | -20 to +70 | °C |
| | Extended | -40 to +85 | |
| Storage Temperature Range | | -55 to +125 | |
| Aging | | ±3 | PPM Max/Year |
| Load Capacitance | | 10 to 32 and Series Resonance | pF |
| Shunt Capacitance | | 7.0 | pF |
| Equivalent Ser Resistance (ESR) | | See ESR Table | Ohms |
| Drive Level | | 100 | uW Max |
| Insulation Resistance | | 500 at 100Vdc (±15Vdc) | M Ohm |

## Frequency Range vs. ESR Values

| Frequency Range in MHz | ESR Ohms Max | Mode of Operation | Frequency Range in MHz | ESR Ohms Max | Mode of Operation |
|---|---|---|---|---|---|
| 8.000 to 10.000 | 150 | Fundamental | 30.100 to 52.000 | 30 | Fundamental |
| 10.100 to 12.000 | 90 | Fundamental | 40.000 to 52.000 | 100 | Third Overtone |
| 12.100 to 15.000 | 70 | Fundamental | 52.100 to 80.000 | 100 | Third Overtone |
| 15.100 to 30.000 | 50 | Fundamental | 80.100 to 150.000 | 80 | Third Overtone |

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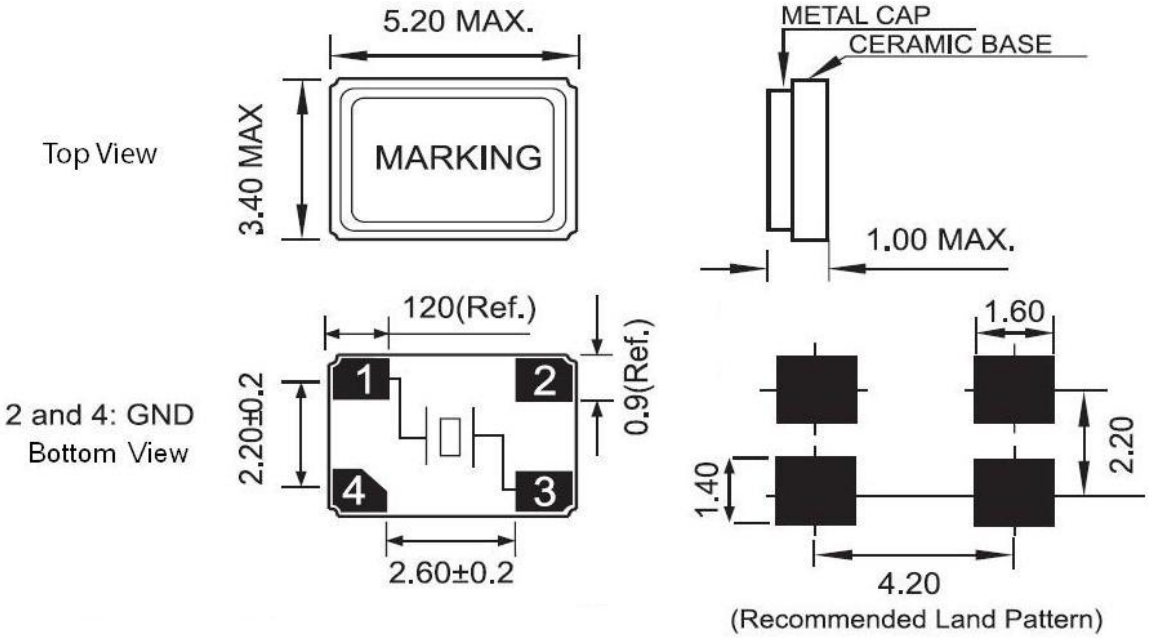
## Part Numbering System

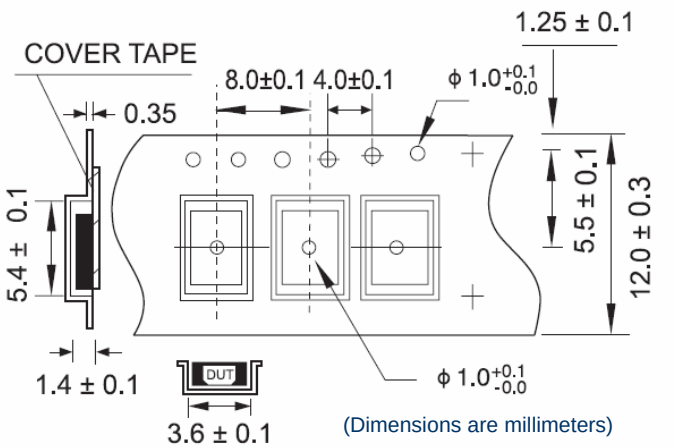
| Type | - | Frequency | - | Load Capacitance | - | Mode (*1) | - | Tolerance/ Stability (*1) | - | Extended Temperature (*1) | - | Tape & Reel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WSC50 | | in MHz | | 10 to 32 for Parallel or S for Series | | 3OT – Third Overtone | | (PPM/PPM) e.g. 1020, 1010 | | EXT | | TR |

Examples : WSC50-12.000-18-TR, WSC50-48.000-18-3OT-TR or WSC50-52.000-S-1010-EXT-TR

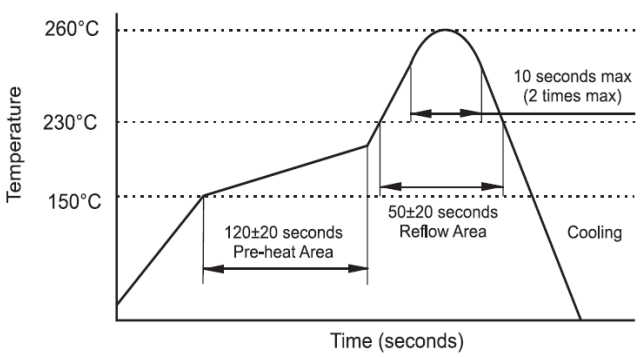
## Mechanical Outline




## Carrier Tape Dimensions




## Solder Reflow Characterisitc




Notes:

1 - Fundamental Mode, 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.

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