

| Package | Description |
|------------------------|--------------------|
| 3.2 x 2.5 mm Chip Type | SMD Quartz Crystal |

Features

- Compact and Thin (0.65mm profile)
- Heat and Shock Resistance
- Suitable application includes telecommunications equipment, short-range radio link modules, DVC, DSC, PDA, and PC
- RoHs/ Lead Free compliant



Electrical Characteristics

| Parameter | Symbol | Condition | Minimum | Typical | Maximum | Units |
|-----------------------|--------|----------------|---------|---------|---------|----------|
| Frequency Range | Fo | - | 13 | - | 54 | MHz |
| Frequency Tolerance | F/Fo | @ 25°C | ±10 | - | ±30 | ppm |
| Temperature Stability | Tc | REFTO25°C | ±10 | - | ±30 | ppm(°C) |
| Operating Temperature | TORP | - | -20 | - | +70 | °C |
| Storage Temperature | TSTG | - | -40 | - | +85 | °C |
| Shunt Capacitance | Co | - | - | - | 3 | pF |
| Load Capacitance | CL | - | 8 | - | 30 | pF |
| Insulation Resistance | IR | - | 500 | - | - | M |
| Drive Level | DL | 100VDC | 10 | 100 | 300 | μ W |
| Aging | Fa | @25°C per year | -2.0 | - | +2.0 | Ppm |

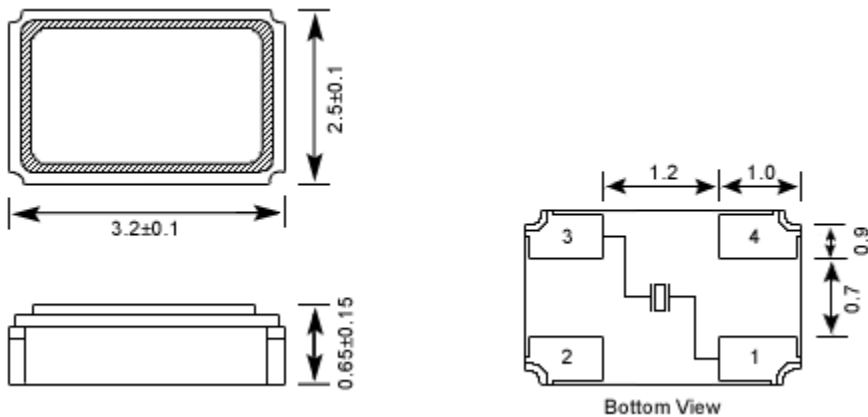
Operation Mode and Motional Resistance

| Frequency Range | Mode | Ohm Max |
|-----------------|-------------|---------|
| 13.000 ~ 19.999 | Fundamental | 80 |
| 20.000 ~ 25.999 | Fundamental | 70 |
| 26.000 ~ 54.000 | Fundamental | 50 |

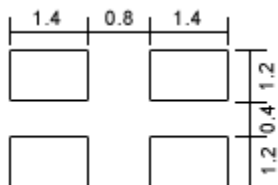
Part Numbering Guide

| Series Number | Frequency | Load Capacitance | Tolerance @ +25°C | Frequency Stability Over Temp (°C) | Operating Temp (°C) | Packaging** |
|---|--------------------------|---------------------------------|--|---|---|---------------------------------|
| 278 | 25.0M | 09 | 15 | K | S | TR |
| Oscilent 3.2 x 2.5 SMD | Enter desired frequency. | Enter desired capacitance here. | Blank * = ±30 PPM 10 = ±10 PPM 15 = ±15 PPM 20 = ±20 PPM 25 = ±25 PPM 50 = ±50 PPM Avail. = ±10 ~ ±30 | Blank* = ±50 PPM G = ±30 PPM H = ±20 PPM K = ±15 PPM L = ±10 PPM N = ±5 PPM M = ±100 PPM Avail. = ±10 ~ ±30 | P = 0~+50 R = -10~+60 S = -20~+70 T = -30~+80 W = -40~+85 | Blank* = Bulk TR = Tape/Reel |
| <p>NOTE: Deviations on all parameters available. Please consult Oscilent for details.</p> <p>*STANDARDS: "Blank" part number selections indicate standard variables for that particular characteristic.</p> | | | | | | |

Package Dimensions

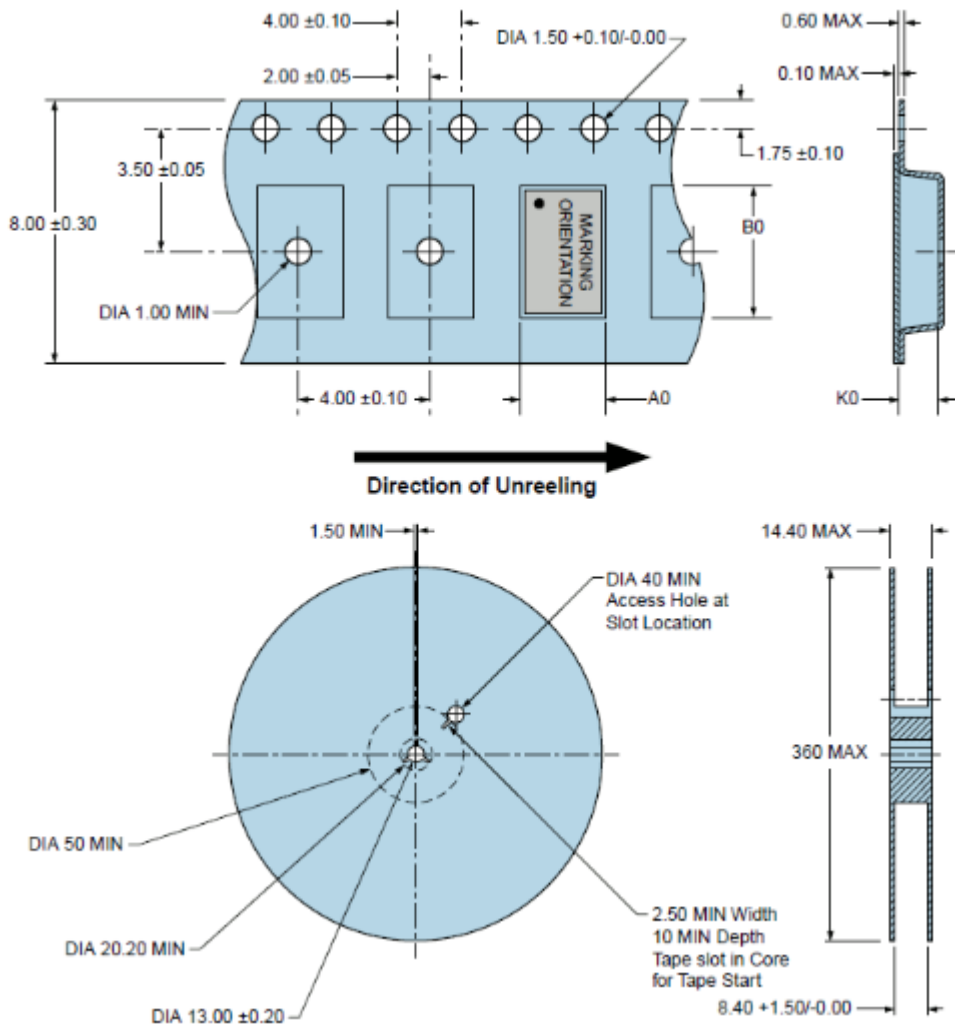


Solder Pad Layout



Tape & Reel

- 1000 pieces per reel
- Compliant to EIA-481
- All Dimensions in Millimeters



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