

# EA3250LA10-25.000M TR [Click part number to visit Part Number Details page](#)

## REGULATORY COMPLIANCE (Data Sheet downloaded on Mar 9, 2017)



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## ITEM DESCRIPTION

Quartz Crystal Resonator 3.2mm x 5.0mm x 1.0mm 4 Pad Ceramic Surface Mount (SMD) 25.000MHz  $\pm 15$ ppm at 25°C,  $\pm 20$ ppm over -20°C to +70°C 10pF Parallel Resonant

## ELECTRICAL SPECIFICATIONS

|                               |                                                        |
|-------------------------------|--------------------------------------------------------|
| Nominal Frequency             | 25.000MHz                                              |
| Frequency Tolerance/Stability | $\pm 15$ ppm at 25°C, $\pm 20$ ppm over -20°C to +70°C |
| Aging at 25°C                 | $\pm 3$ ppm/Year Maximum                               |
| Load Capacitance              | 10pF Parallel Resonant                                 |
| Shunt Capacitance             | 5pF Maximum                                            |
| Equivalent Series Resistance  | 40 Ohms Maximum                                        |
| Mode of Operation             | AT-Cut Fundamental                                     |
| Drive Level                   | 100 $\mu$ Watts Maximum                                |
| Spurious Response             | -3dB Minimum (Measured from Fo to Fo+5000ppm)          |
| Storage Temperature Range     | -40°C to +125°C                                        |
| Insulation Resistance         | 500 Megaohms Minimum (Measured at 100Vdc)              |

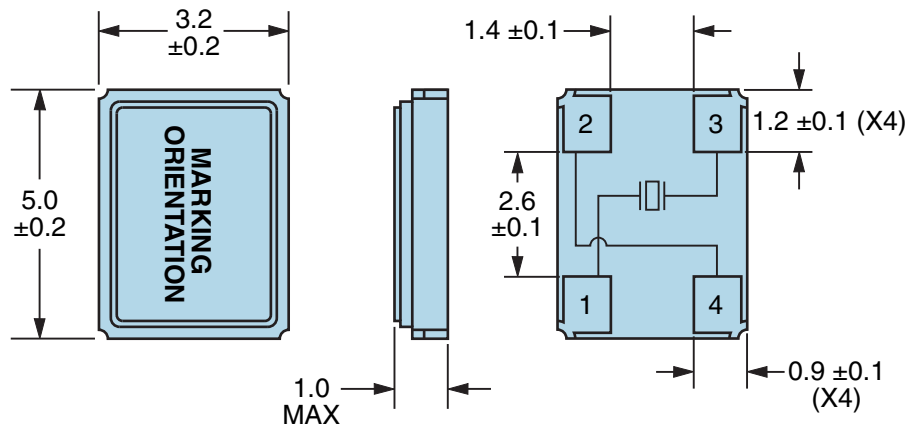
## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

|                              |                                               |
|------------------------------|-----------------------------------------------|
| ESD Susceptibility           | MIL-STD-883, Method 3015, Class 1, HBM: 1500V |
| Fine Leak Test               | MIL-STD-883, Method 1014, Condition A         |
| Flammability                 | UL94-V0                                       |
| Gross Leak Test              | MIL-STD-883, Method 1014, Condition C         |
| Mechanical Shock             | MIL-STD-883, Method 2002, Condition B         |
| Moisture Resistance          | MIL-STD-883, Method 1004                      |
| Moisture Sensitivity         | J-STD-020, MSL 1                              |
| Resistance to Soldering Heat | MIL-STD-202, Method 210, Condition K          |
| Resistance to Solvents       | MIL-STD-202, Method 215                       |
| Solderability                | MIL-STD-883, Method 2003                      |
| Temperature Cycling          | MIL-STD-883, Method 1010, Condition B         |
| Vibration                    | MIL-STD-883, Method 2007, Condition A         |

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MECHANICAL DIMENSIONS (all dimensions in millimeters)

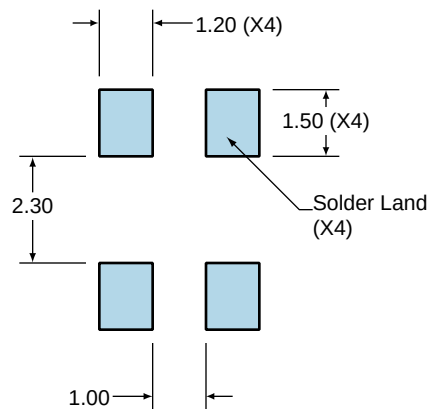


Note: Chamfer not shown.

Seam Sealed  
Terminal Plating Thickness: Gold (0.3 to 1.0µm) over Nickel (1.27 to 8.89µm)

Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are ±0.1

| PIN | CONNECTION   |
|-----|--------------|
| 1   | Crystal      |
| 2   | Cover/Ground |
| 3   | Crystal      |
| 4   | Cover/Ground |

| LINE | MARKING                                                            |
|------|--------------------------------------------------------------------|
| 1    | <b>E25.00</b><br><i>E=EclipseTek Designator</i>                    |
| 2    | <b>XXXXXX</b><br><i>XXXXXX=EclipseTek Manufacturing Identifier</i> |

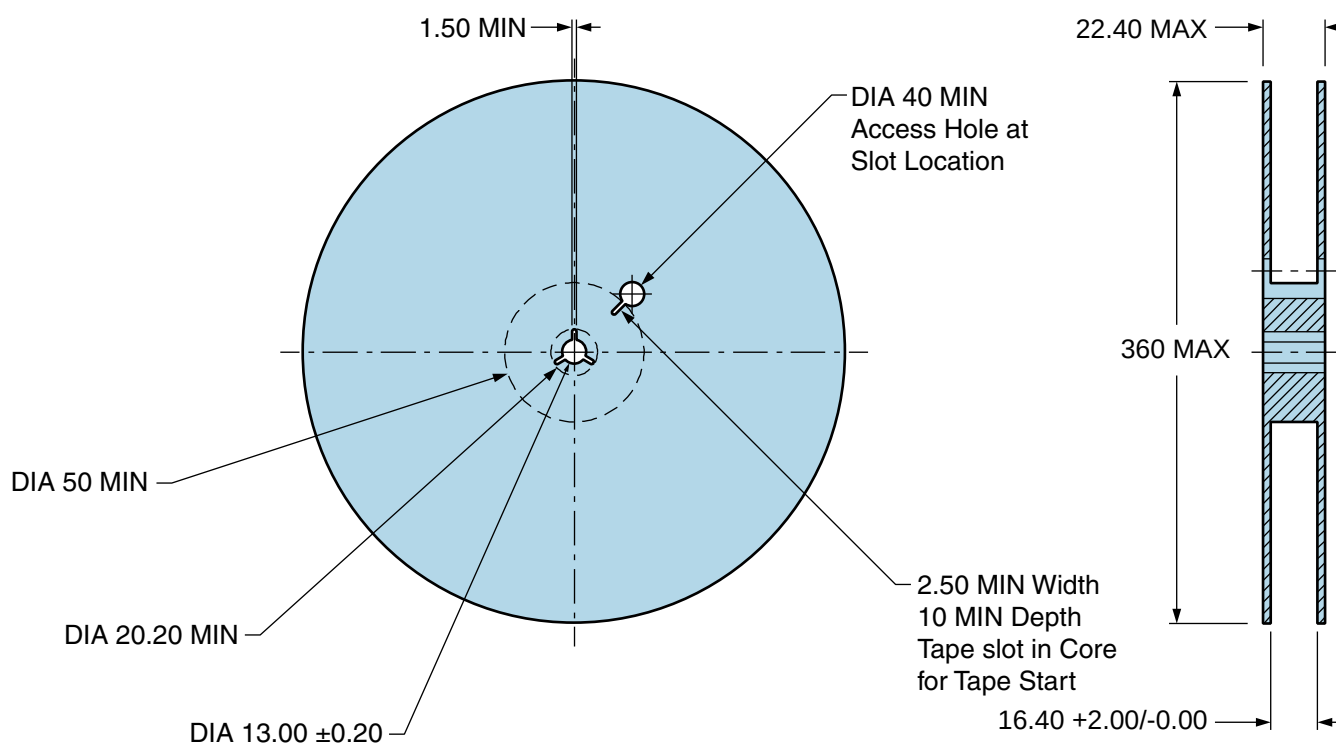
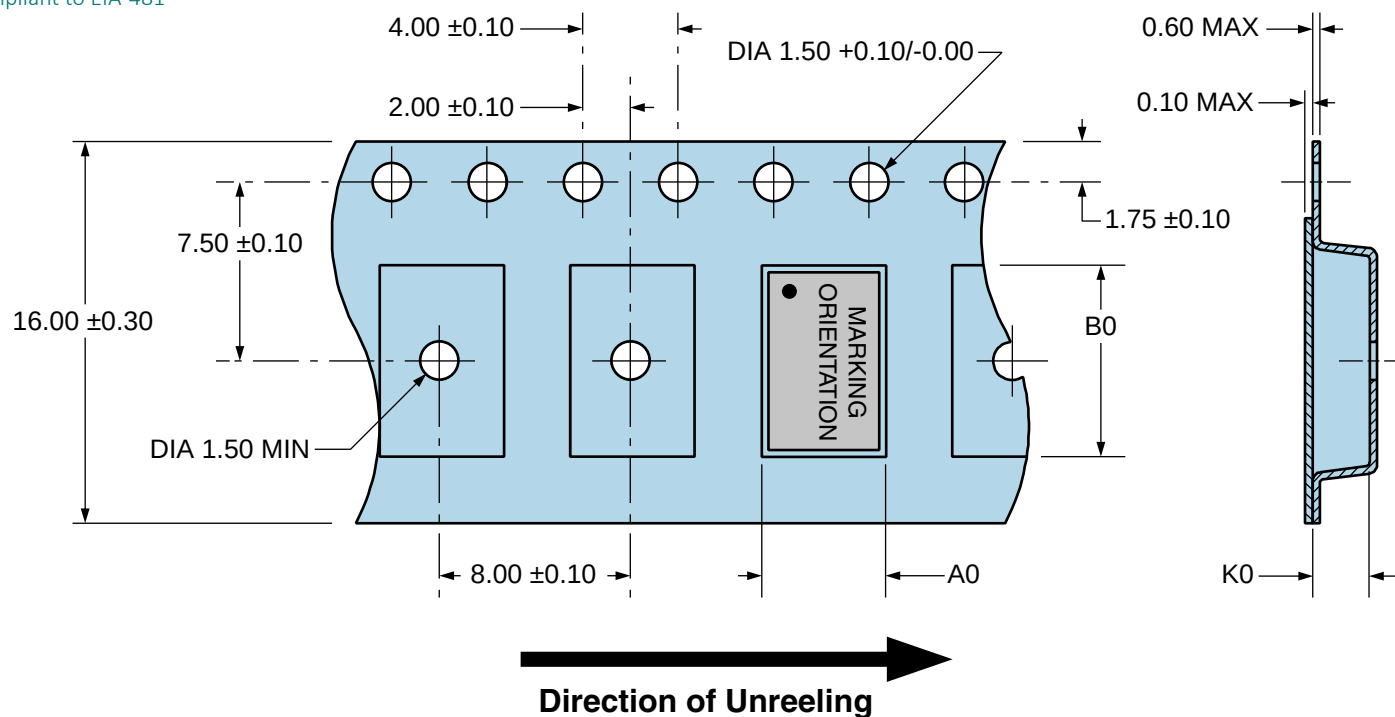
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## Tape & Reel Dimensions

Quantity Per Reel: 1,000 units

All Dimensions in Millimeters

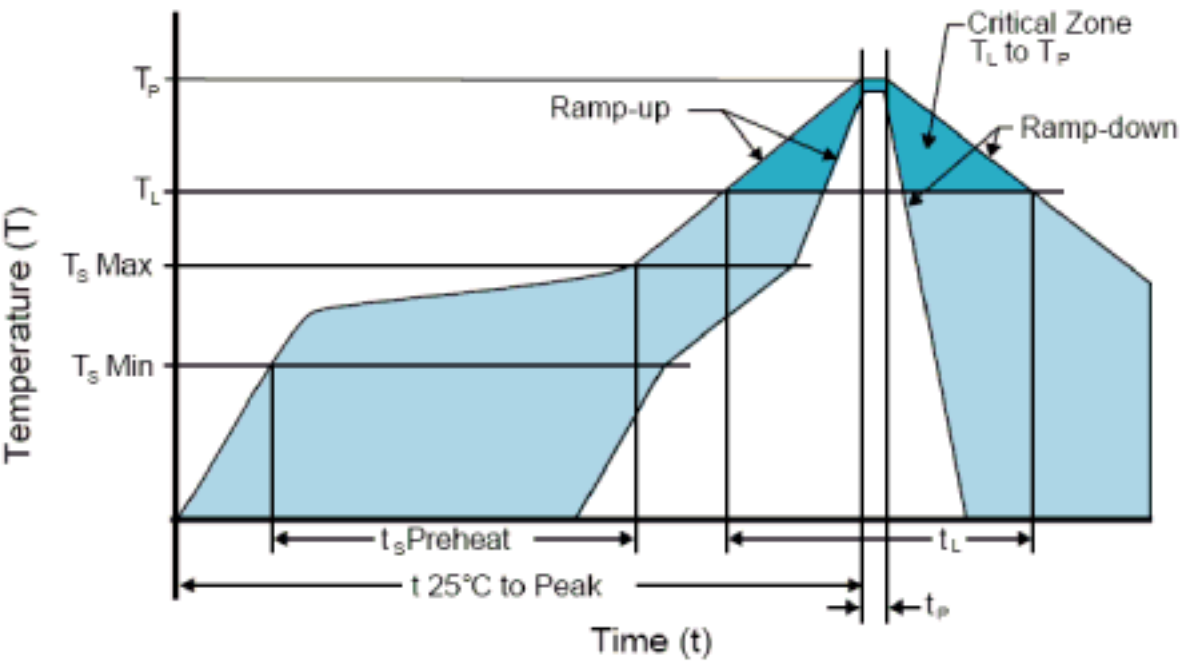
Compliant to EIA-481



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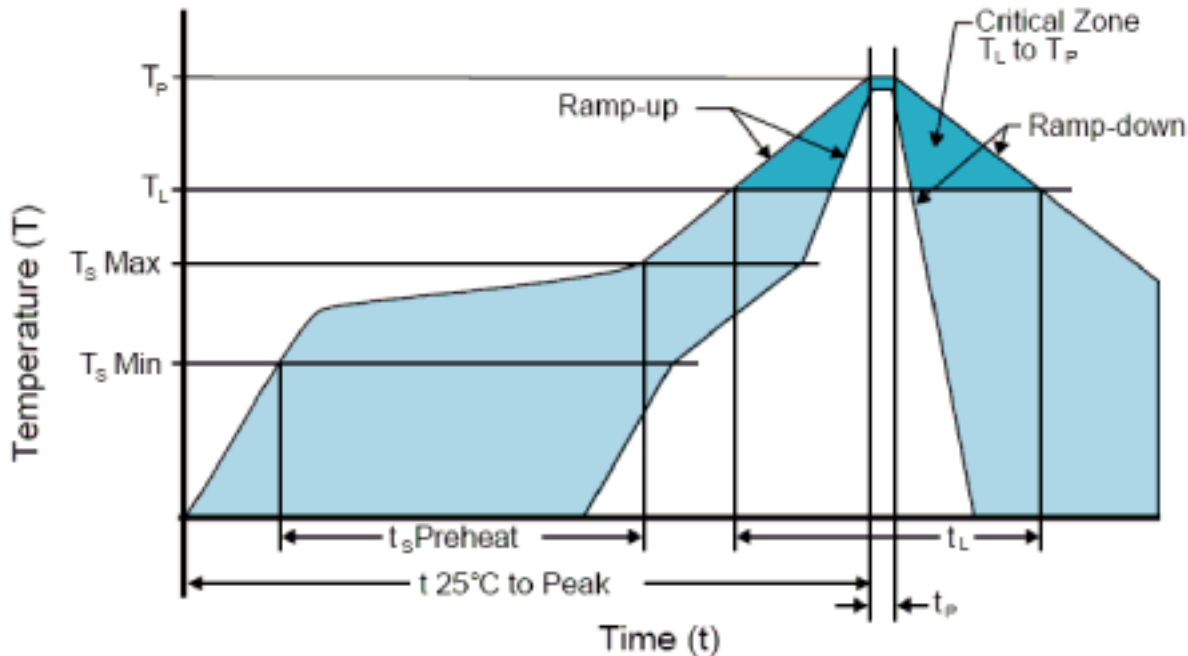


Recommended Solder Reflow Methods



High Temperature Infrared/Convection

|                                     |                                                  |
|-------------------------------------|--------------------------------------------------|
| TS MAX to TL (Ramp-up Rate)         | 3°C/Second Maximum                               |
| Preheat                             |                                                  |
| - Temperature Minimum (TS MIN)      | 150°C                                            |
| - Temperature Typical (TS TYP)      | 175°C                                            |
| - Temperature Maximum (TS MAX)      | 200°C                                            |
| - Time (ts MIN)                     | 60 - 180 Seconds                                 |
| Ramp-up Rate (TL to TP)             | 3°C/Second Maximum                               |
| Time Maintained Above:              |                                                  |
| - Temperature (TL)                  | 217°C                                            |
| - Time (tL)                         | 60 - 150 Seconds                                 |
| Peak Temperature (TP)               | 260°C Maximum for 10 Seconds Maximum             |
| Target Peak Temperature (TP Target) | 250°C +0/-5°C                                    |
| Time within 5°C of actual peak (tp) | 20 - 40 Seconds                                  |
| Ramp-down Rate                      | 6°C/Second Maximum                               |
| Time 25°C to Peak Temperature (t)   | 8 Minutes Maximum                                |
| Moisture Sensitivity Level          | Level 1                                          |
| Additional Notes                    | Temperature shown are applied to body of device. |

**EA3250LA10-25.000M TR**
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**Recommended Solder Reflow Methods****Low Temperature Infrared/Convection 245°C**

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>TS MAX to TL (Ramp-up Rate)</b>         | 5°C/Second Maximum                                     |
| <b>Preheat</b>                             |                                                        |
| - Temperature Minimum (TS MIN)             | N/A                                                    |
| - Temperature Typical (TS TYP)             | 150°C                                                  |
| - Temperature Maximum (TS MAX)             | N/A                                                    |
| - Time (ts MIN)                            | 30 - 60 Seconds                                        |
| <b>Ramp-up Rate (TL to TP)</b>             | 5°C/Second Maximum                                     |
| <b>Time Maintained Above:</b>              |                                                        |
| - Temperature (TL)                         | 150°C                                                  |
| - Time (tL)                                | 200 Seconds Maximum                                    |
| <b>Peak Temperature (TP)</b>               | 245°C Maximum                                          |
| <b>Target Peak Temperature (TP Target)</b> | 245°C Maximum 2 Times / 230°C Maximum 1 Time           |
| <b>Time within 5°C of actual peak (tp)</b> | 10 Seconds Maximum 2 Times / 80 Seconds Maximum 1 Time |
| <b>Ramp-down Rate</b>                      | 5°C/Second Maximum                                     |
| <b>Time 25°C to Peak Temperature (t)</b>   | N/A                                                    |
| <b>Moisture Sensitivity Level</b>          | Level 1                                                |
| <b>Additional Notes</b>                    | Temperature shown are applied to body of device.       |

**Low Temperature Manual Soldering**

185°C Maximum for 10 Seconds Maximum, 2 times Maximum. (Temperature shown are applied to body of device.)

**High Temperature Manual Soldering**

260°C Maximum for 5 Seconds Maximum, 2 times Maximum. (Temperature shown are applied to body of device.)

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