

# EA3560LA10-14.31818M TR [Click part number to visit Part Number Details page](#)

## REGULATORY COMPLIANCE (Data Sheet downloaded on Jun 21, 2020)



◀ Click badges to download compliance docs

Regulatory Compliance standards are subject to updates by governing bodies. Click the badges to download the latest compliance docs for this part number directly from Ecliptek.



## ITEM DESCRIPTION

Quartz Crystal Resonator 3.5mm x 6.0mm x 1.0mm 4 Pad Ceramic Surface Mount (SMD) 14.31818MHz  $\pm 15$ ppm at 25°C,  $\pm 20$ ppm over -20°C to +70°C 10pF Parallel Resonant

## ELECTRICAL SPECIFICATIONS

|                               |                                                        |
|-------------------------------|--------------------------------------------------------|
| Nominal Frequency             | 14.31818MHz                                            |
| 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  | 60 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 +85°C                                         |
| Insulation Resistance         | 500 Megaohms Minimum (Measured at 100Vdc)              |

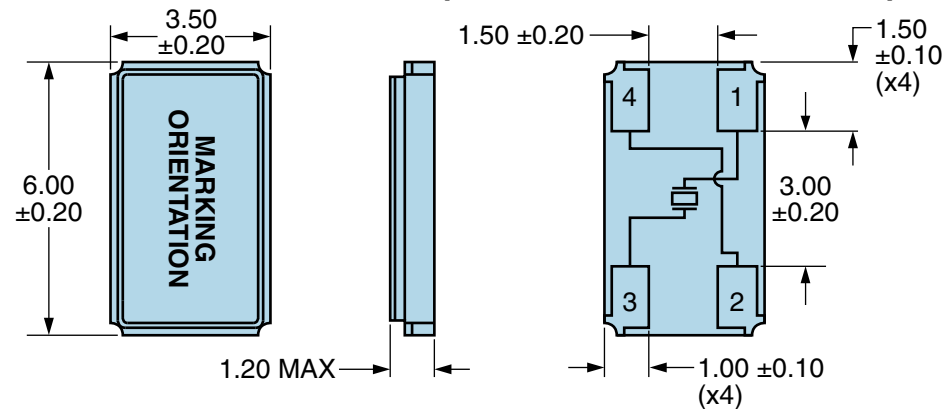
## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

|                              |                                               |
|------------------------------|-----------------------------------------------|
| 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         |

EA3560LA10-14.31818M TR

[Click part number to visit Part Number Details page](#)

MECHANICAL DIMENSIONS (all dimensions in millimeters)



Note: Chamfer not shown.

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

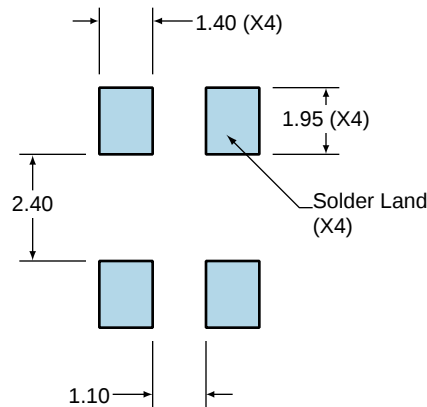
| LINE | MARKING                                                   |
|------|-----------------------------------------------------------|
| 1    | <b>E14.31</b><br>E=Ecliptek Designator                    |
| 2    | <b>XXXXXX</b><br>XXXXXX=Ecliptek Manufacturing Identifier |

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

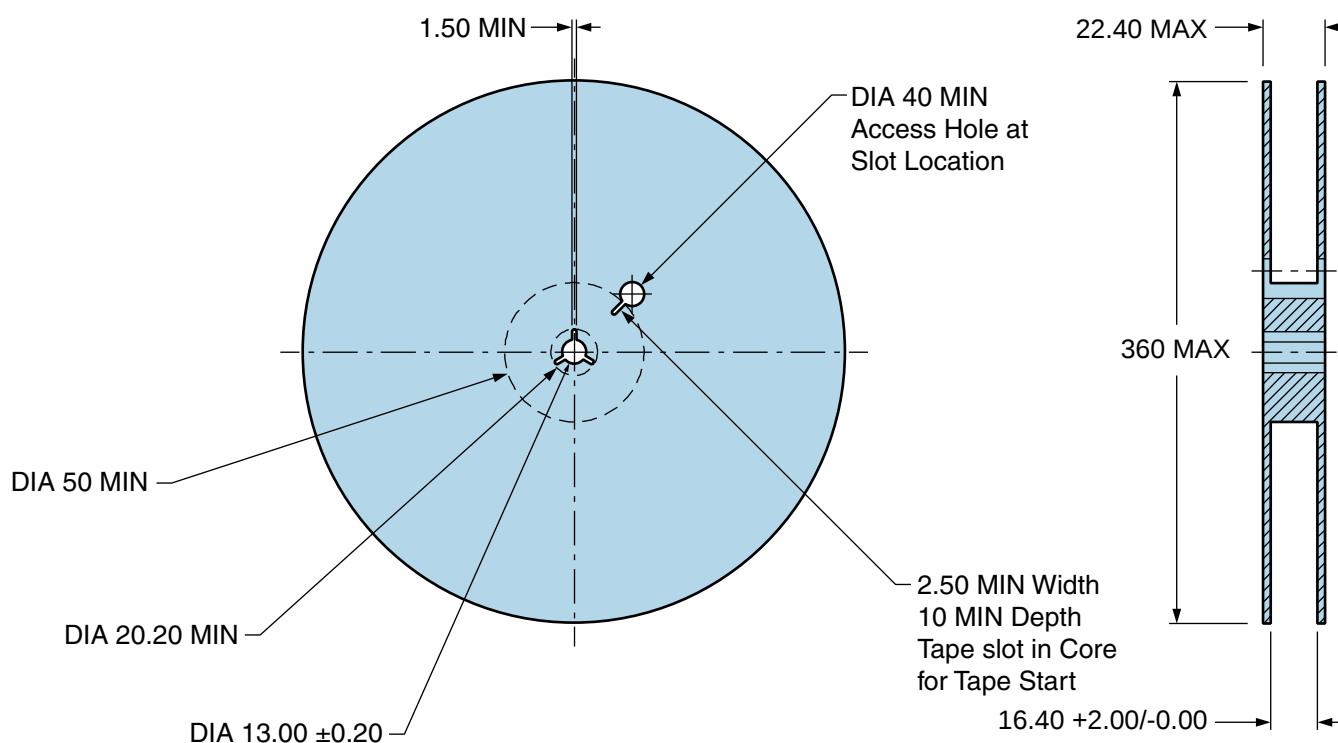
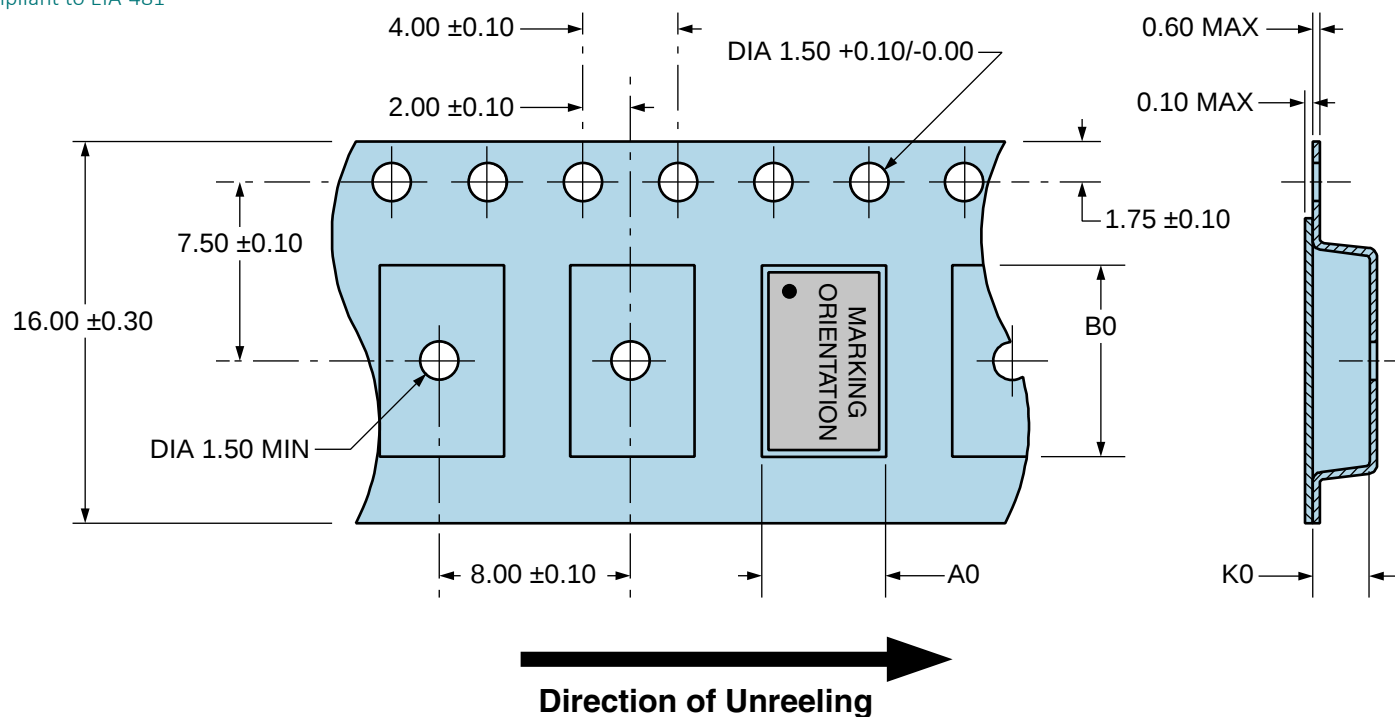
# EA3560LA10-14.31818M TR

## Tape & Reel Dimensions

Quantity Per Reel: 1,000 units

All Dimensions in Millimeters

Compliant to EIA-481



EA3560LA10-14.31818M TR

[Click part number to visit Part Number Details page](#)

Recommended Solder Reflow Methods



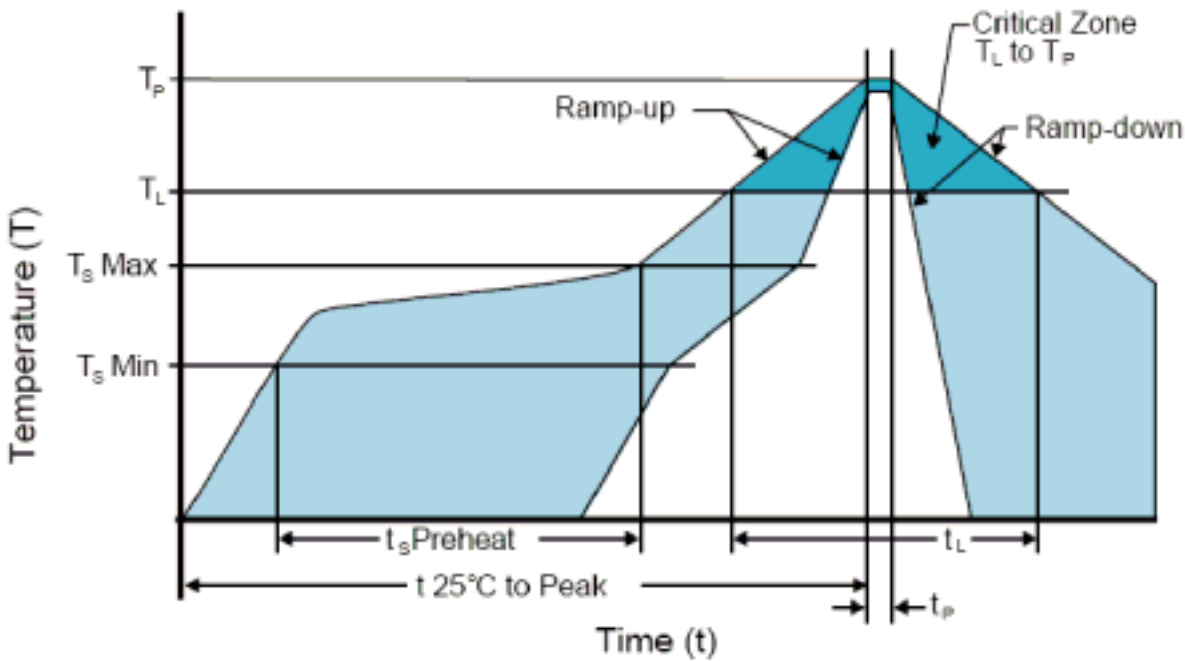
High Temperature Infrared/Convection

|                                     |                                                   |
|-------------------------------------|---------------------------------------------------|
| 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                    | Temperatures shown are applied to body of device. |

EA3560LA10-14.31818M TR

[Click part number to visit Part Number Details page](#)

Recommended Solder Reflow Methods



Low Temperature Infrared/Convection 245°C

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

Low Temperature Manual Soldering

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

High Temperature Manual Soldering

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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Ecliptek:](#)

[EA3560LA10-14.31818M TR](#)



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331