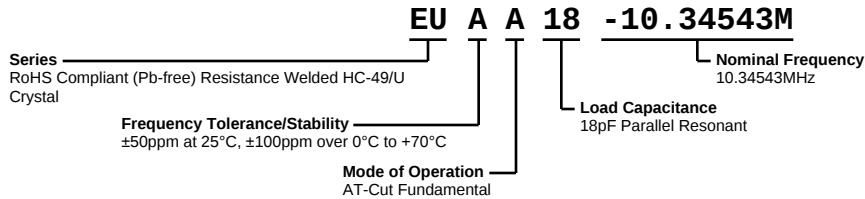


# EUAA18-10.34543M



## ELECTRICAL SPECIFICATIONS

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Nominal Frequency             | 10.34543MHz                               |
| Frequency Tolerance/Stability | ±50ppm at 25°C, ±100ppm over 0°C to +70°C |
| Aging at 25°C                 | ±5ppm/year Maximum                        |
| Load Capacitance              | 18pF Parallel Resonant                    |
| Shunt Capacitance (C0)        | 7pF Maximum                               |
| Equivalent Series Resistance  | 30 Ohms Maximum                           |
| Mode of Operation             | AT-Cut Fundamental                        |
| Drive Level                   | 2mWatts Maximum                           |
| Storage Temperature Range     | -40°C to +125°C                           |
| Insulation Resistance         | 500 Megaohms Minimum at 100Vdc            |

## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

|                              |                                       |
|------------------------------|---------------------------------------|
| Fine Leak Test               | MIL-STD-883, Method 1014, Condition A |
| Gross Leak Test              | MIL-STD-883, Method 1014, Condition C |
| Lead Integrity               | MIL-STD-883, Method 2004              |
| Lead Termination             | Sn 2µm - 6µm                          |
| Mechanical Shock             | MIL-STD-202, Method 213, Condition C  |
| Resistance to Soldering Heat | MIL-STD-202, Method 210               |
| Resistance to Solvents       | MIL-STD-202, Method 215               |
| Solderability                | MIL-STD-883, Method 2003              |
| Temperature Cycling          | MIL-STD-883, Method 1010              |
| Vibration                    | MIL-STD-883, Method 2007, Condition A |

# EUAA18-10.34543M

MECHANICAL DIMENSIONS (all dimensions in millimeters)



| LINE | MARKING                                       |
|------|-----------------------------------------------|
| 1    | ECLIPTEK                                      |
| 2    | E10.345M<br><i>E=Configuration Designator</i> |
| 3    | XX<br><i>XX=Ecliptek Manufacturing Code</i>   |

## Recommended Solder Reflow Methods



### High Temperature Solder Bath (Wave Solder)

**$T_S$  MAX to  $T_L$  (Ramp-up Rate)** 3°C/second Maximum

#### Preheat

- Temperature Minimum ( $T_S$  MIN) 150°C  
 - Temperature Typical ( $T_S$  TYP) 175°C  
 - Temperature Maximum ( $T_S$  MAX) 200°C  
 - Time ( $t_s$  MIN) 60 - 180 Seconds

**Ramp-up Rate ( $T_L$  to  $T_P$ )** 3°C/second Maximum

#### Time Maintained Above:

- Temperature ( $T_L$ ) 217°C  
 - Time ( $t_L$ ) 60 - 150 Seconds

**Peak Temperature ( $T_P$ )** 260°C Maximum for 10 Seconds Maximum

**Target Peak Temperature ( $T_P$  Target)** 250°C +0/-5°C

**Time within 5°C of actual peak ( $t_p$ )** 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

## Recommended Solder Reflow Methods



### Low Temperature Solder Bath (Wave Solder)

|                                                          |                                                       |
|----------------------------------------------------------|-------------------------------------------------------|
| <b>T<sub>s</sub> MAX to T<sub>L</sub> (Ramp-up Rate)</b> | 5°C/second Maximum                                    |
| <b>Preheat</b>                                           |                                                       |
| - Temperature Minimum (T <sub>s</sub> MIN)               | N/A                                                   |
| - Temperature Typical (T <sub>s</sub> TYP)               | 150°C                                                 |
| - Temperature Maximum (T <sub>s</sub> MAX)               | N/A                                                   |
| - Time (t <sub>s</sub> MIN)                              | 30 - 60 Seconds                                       |
| <b>Ramp-up Rate (T<sub>L</sub> to T<sub>p</sub>)</b>     | 5°C/second Maximum                                    |
| <b>Time Maintained Above:</b>                            |                                                       |
| - Temperature (T <sub>L</sub> )                          | 150°C                                                 |
| - Time (t <sub>L</sub> )                                 | 200 Seconds Maximum                                   |
| <b>Peak Temperature (T<sub>p</sub>)</b>                  | 245°C Maximum                                         |
| <b>Target Peak Temperature (T<sub>p</sub> Target)</b>    | 245°C Maximum 1 Time / 235°C Maximum 2 Times          |
| <b>Time within 5°C of actual peak (t<sub>p</sub>)</b>    | 5 seconds Maximum 1 Time / 15 seconds Maximum 2 Times |
| <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                                               |

### Low Temperature Manual Soldering

185°C Maximum for 10 seconds Maximum, 2 times Maximum.

### High Temperature Manual Soldering

260°C Maximum for 5 seconds Maximum, 2 times Maximum.