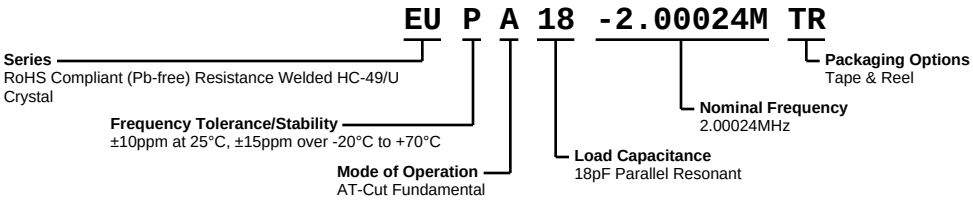
# EUPA18-2.00024M TR




## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| **Nominal Frequency** | 2.00024MHz |
| **Frequency Tolerance/Stability** | ±10ppm at 25°C, ±15ppm over -20°C to +70°C |
| **Aging at 25°C** | ±5ppm/year Maximum |
| **Load Capacitance** | 18pF Parallel Resonant |
| **Shunt Capacitance (C0)** | 7pF Maximum |
| **Equivalent Series Resistance** | 550 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 |

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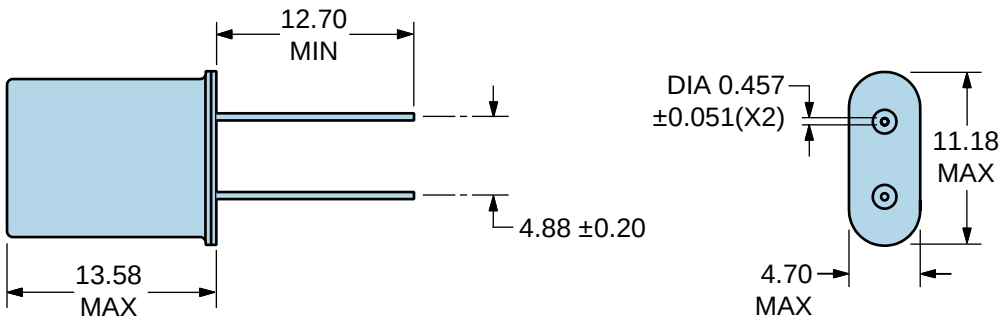
## MECHANICAL DIMENSIONS (all dimensions in millimeters)

| LINE | MARKING |
|---|---|
| 1 | **ECLIPTEK** |
| 2 | **E2.0002M**<br>*E=Configuration Designator* |
| 3 | **XX**<br>*XX=Ecliptek Manufacturing Code* |



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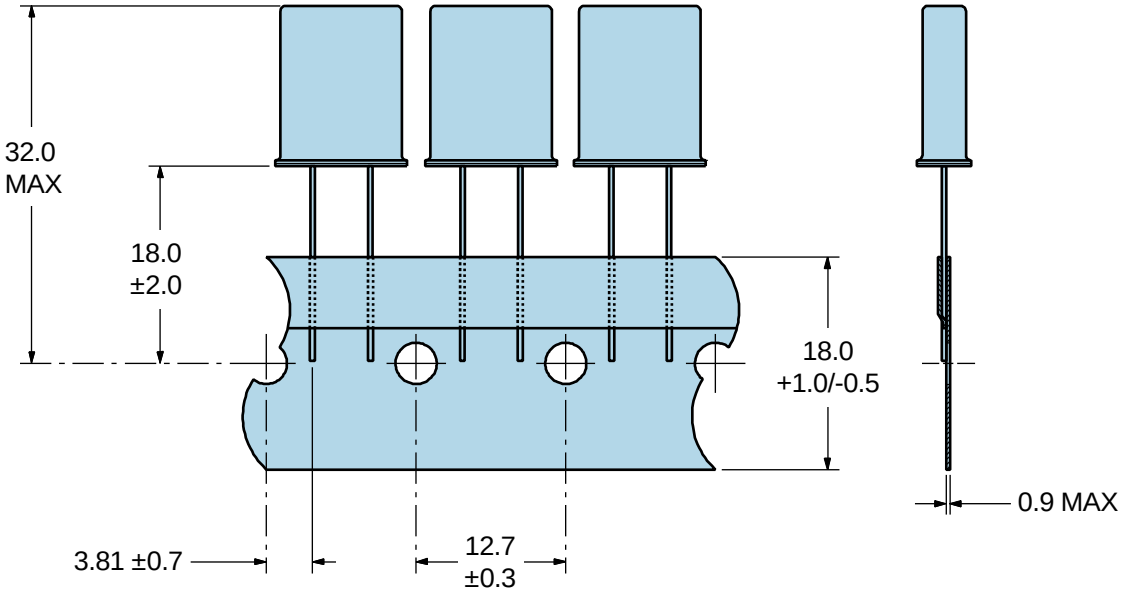
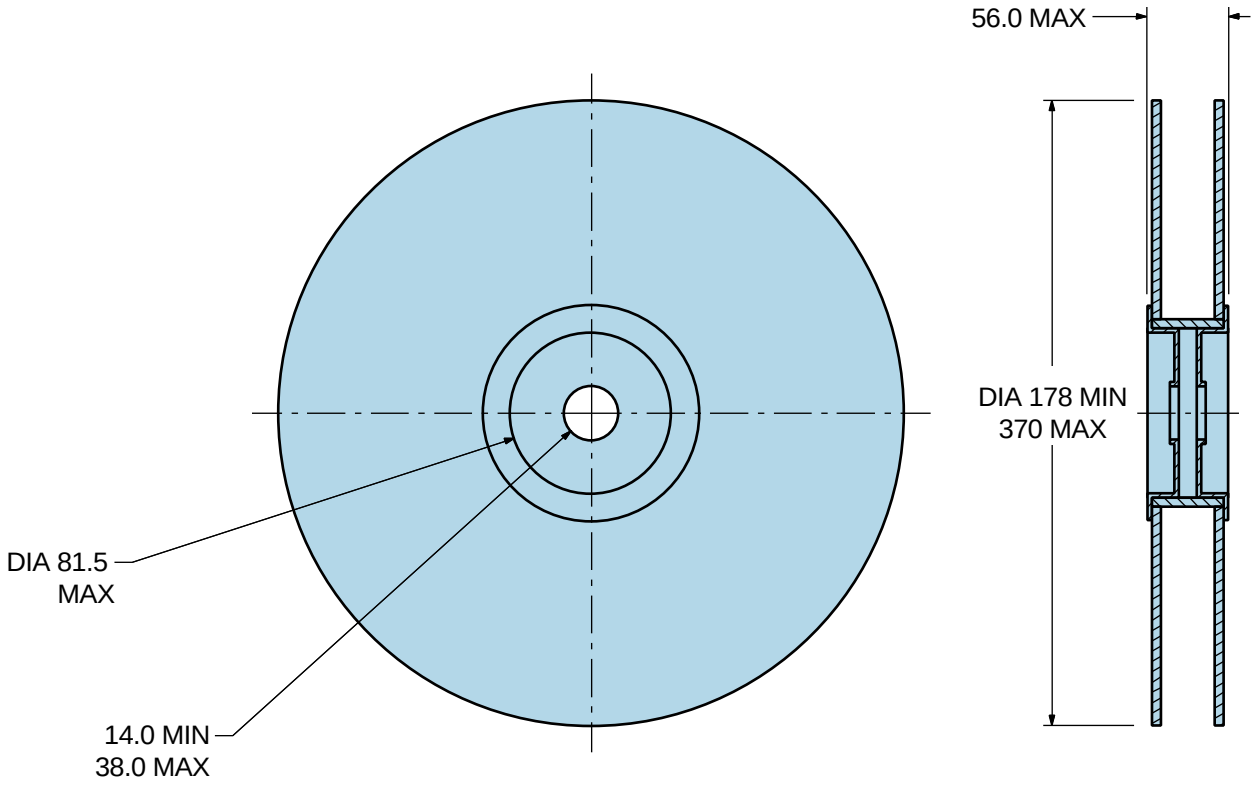
## Tape & Reel Dimensions

Quantity Per Reel: 1,000 units

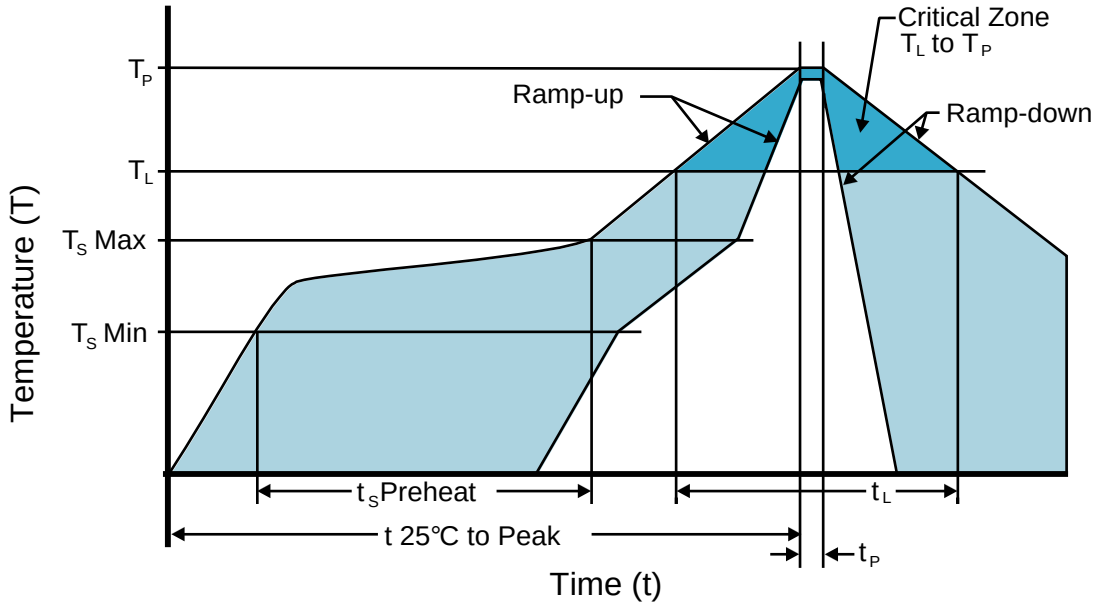



*Compliant to EIA 468B



# EUPA18-2.00024M TR

## 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 |

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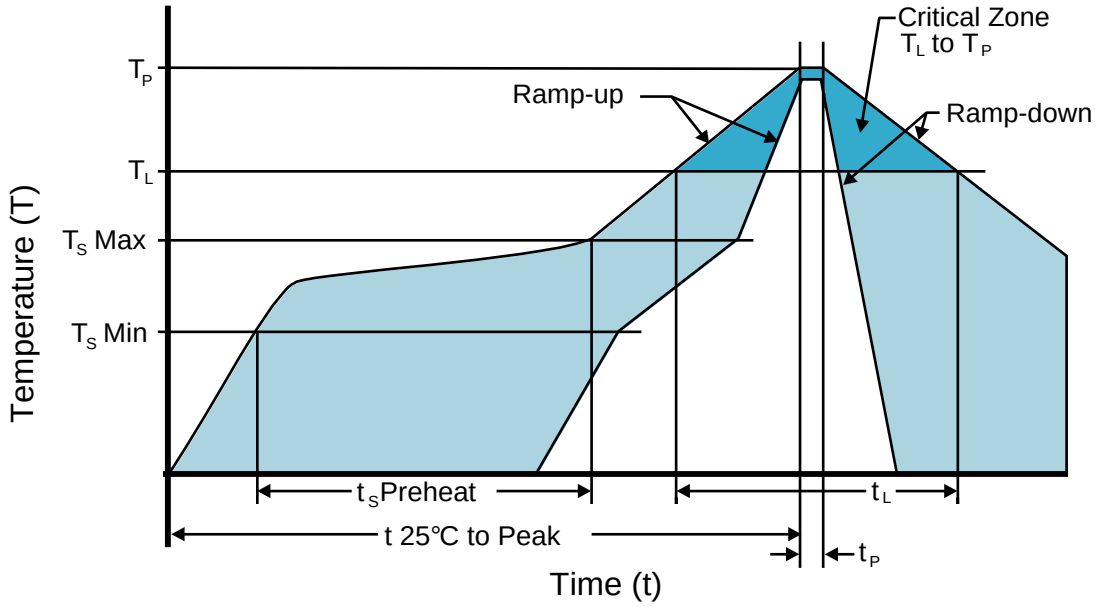
## Recommended Solder Reflow Methods




### Low Temperature Solder Bath (Wave Solder)

| | |
|---|---|
| **$T_S$ MAX to $T_L$ (Ramp-up Rate)** | 5°C/second Maximum |
| **Preheat** | |
| **- Temperature Minimum ($T_S$ MIN)** | N/A |
| **- Temperature Typical ($T_S$ TYP)** | 150°C |
| **- Temperature Maximum ($T_S$ MAX)** | N/A |
| **- Time ($t_S$ MIN)** | 30 - 60 Seconds |
| **Ramp-up Rate ($T_L$ to $T_P$)** | 5°C/second Maximum |
| **Time Maintained Above:** | |
| **- Temperature ($T_L$)** | 150°C |
| **- Time ($t_L$)** | 200 Seconds Maximum |
| **Peak Temperature ($T_P$)** | 245°C Maximum |
| **Target Peak Temperature ($T_P$ Target)** | 245°C Maximum 1 Time / 235°C Maximum 2 Times |
| **Time within 5°C of actual peak ($t_p$)** | 5 seconds Maximum 1 Time / 15 seconds Maximum 2 Times |
| **Ramp-down Rate** | 5°C/second Maximum |
| **Time 25°C to Peak Temperature (t)** | N/A |
| **Moisture Sensitivity Level** | 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.