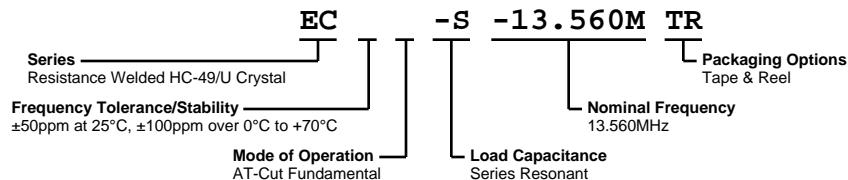


# EC-S-13.560M TR



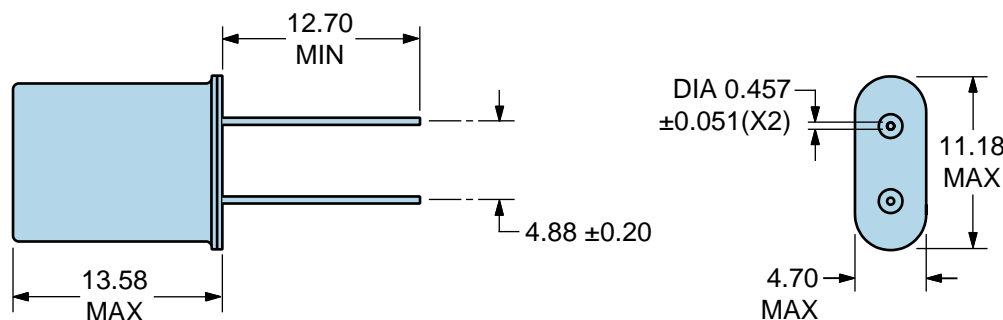
## ELECTRICAL SPECIFICATIONS

Nominal Frequency	13.560MHz
Frequency Tolerance/Stability	$\pm 50\text{ppm}$ at $25^\circ\text{C}$ , $\pm 100\text{ppm}$ over $0^\circ\text{C}$ to $+70^\circ\text{C}$
Aging at $25^\circ\text{C}$	$\pm 5\text{ppm/year}$ Maximum
Load Capacitance	Series Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	25 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	2mWatts Maximum
Storage Temperature Range	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
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
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

## MECHANICAL DIMENSIONS (all dimensions in millimeters)

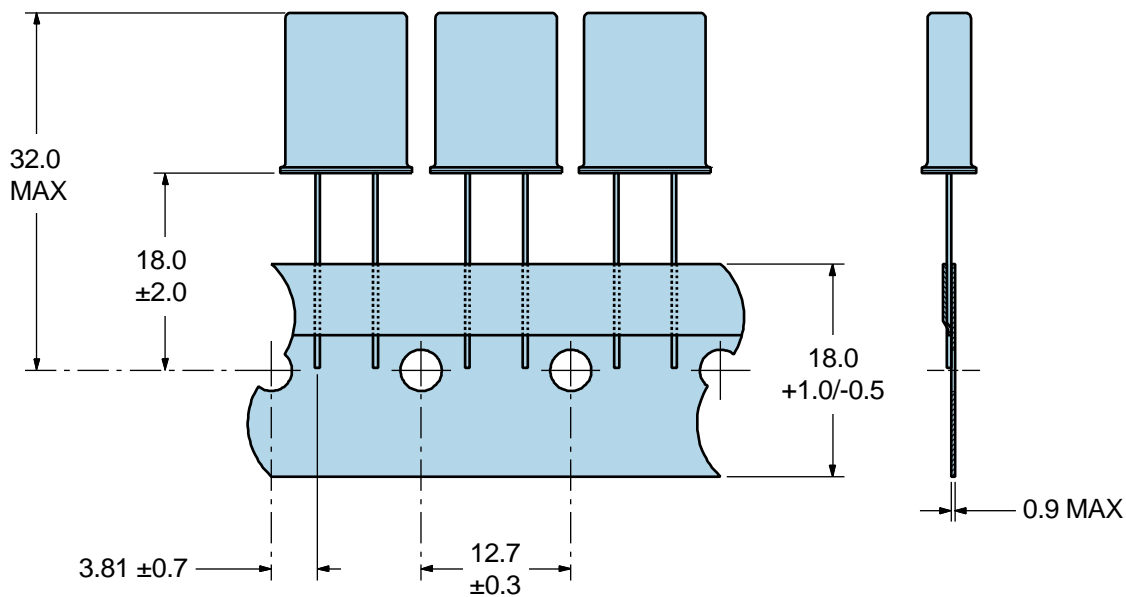


LINE	MARKING
1	ECLIPTEK
2	E13.560M E=Ecliptek Designator or Blank (No Marking)
3	XX XX=Ecliptek Manufacturing Code

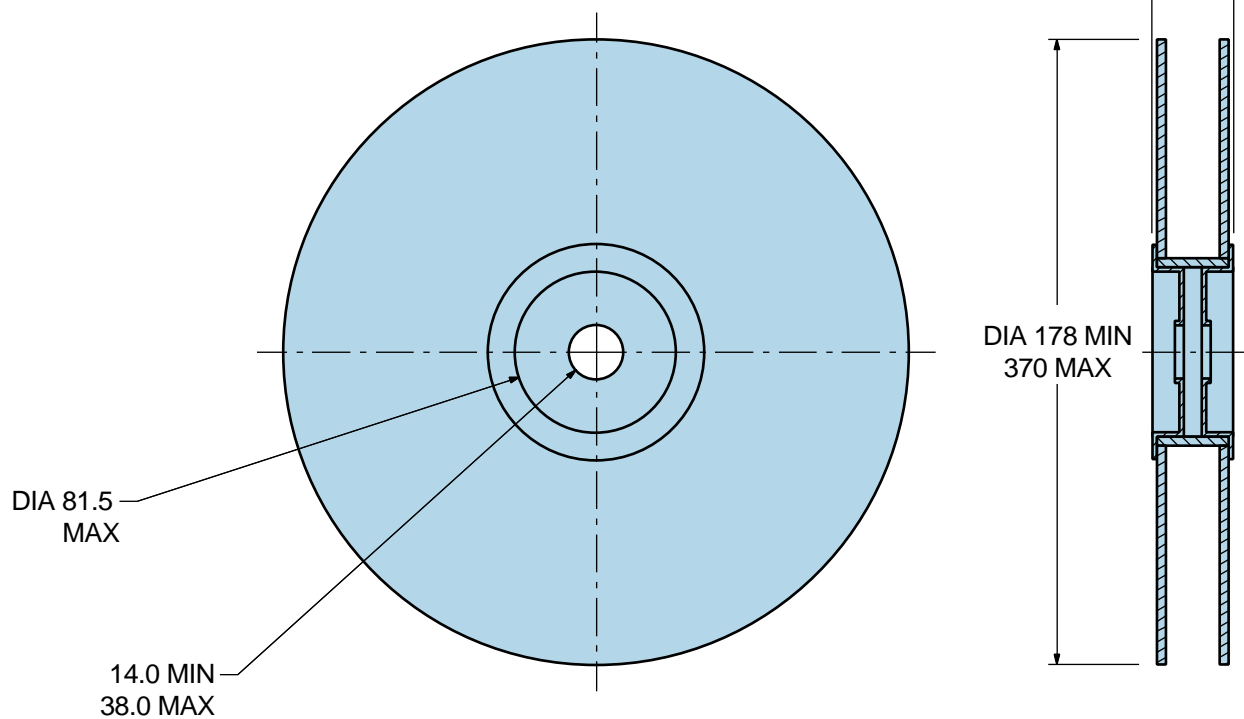
# EC-S-13.560M TR

## Tape & Reel Dimensions

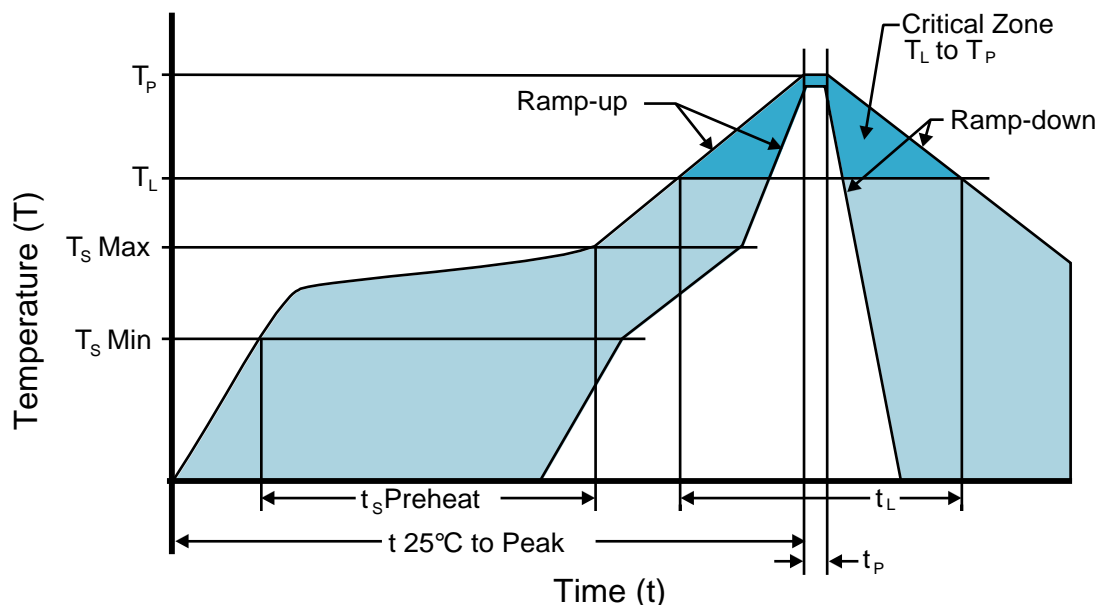
Quantity Per Reel: 1,000 Pieces



\*Compliant to EIA 468B



## Recommended Solder Reflow Methods



### High Temperature Solder Bath (Wave Solder)

T<sub>s</sub> MAX to T<sub>L</sub> (Ramp-up Rate) 3°C/second Maximum

#### Preheat

- Temperature Minimum (T<sub>s</sub> MIN) 150°C  
 - Temperature Typical (T<sub>s</sub> TYP) 175°C  
 - Temperature Maximum (T<sub>s</sub> MAX) 200°C  
 - Time (t<sub>s</sub> MIN) 60 - 180 Seconds

Ramp-up Rate (T<sub>L</sub> to T<sub>p</sub>) 3°C/second Maximum

#### Time Maintained Above:

- Temperature (T<sub>L</sub>) 217°C  
 - Time (t<sub>L</sub>) 60 - 150 Seconds

Peak Temperature (T<sub>p</sub>) 260°C Maximum for 10 Seconds Maximum

Target Peak Temperature (T<sub>p</sub> Target) 250°C +0/-5°C

Time within 5°C of actual peak (t<sub>p</sub>) 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)

**$T_S$  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.