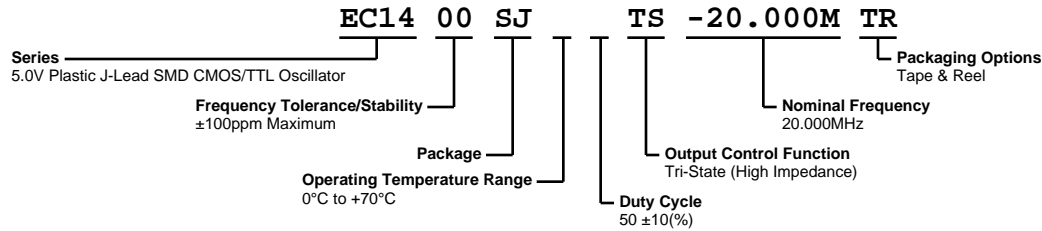


# EC1400SJTS-20.000M TR



## ELECTRICAL SPECIFICATIONS

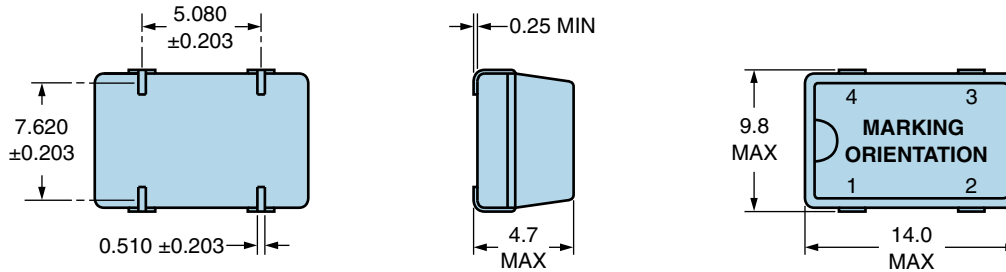
<b>Nominal Frequency</b>	20.000MHz
<b>Frequency Tolerance/Stability</b>	±100ppm Maximum (Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration)
<b>Aging at 25°C</b>	±5ppm/year Maximum
<b>Operating Temperature Range</b>	0°C to +70°C
<b>Supply Voltage</b>	5.0Vdc ±10%
<b>Input Current</b>	23mA Maximum
<b>Output Voltage Logic High (Voh)</b>	Vdd-0.5Vdc Minimum with HCMOS Load, 2.4Vdc Minimum with TTL Load, IOH = -16mA
<b>Output Voltage Logic Low (Vol)</b>	0.4Vdc Maximum with TTL Load, 0.5Vdc Maximum with HCMOS Load, IOL = +16mA
<b>Rise/Fall Time</b>	8nSec Maximum (Measured over 20% to 80% of waveform with HCMOS load or from 0.4Vdc to 2.4Vdc with TTL load.)
<b>Duty Cycle</b>	50 ±10(%) (Measured at 50% of waveform with HCMOS Load or at 1.4Vdc with TTL Load)
<b>Load Drive Capability</b>	10TTL or 50pF HCMOS Load Maximum
<b>Output Logic Type</b>	HCMOS
<b>Output Control Function</b>	Tri-State (High Impedance)
<b>Tri-State Input Voltage (Vih and Vil)</b>	+2.0Vdc Minimum to enable output, +0.8Vdc Maximum to disable output (High Impedance), No Connect to enable output.
<b>Absolute Clock Jitter</b>	±100pSec Maximum
<b>One Sigma Clock Period Jitter</b>	±25pSec Maximum
<b>Start Up Time</b>	4mSec Maximum
<b>Storage Temperature Range</b>	-55°C to +125°C

## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

<b>Fine Leak Test</b>	MIL-STD-883, Method 1014, Condition A
<b>Gross Leak Test</b>	MIL-STD-883, Method 1014, Condition C
<b>Mechanical Shock</b>	MIL-STD-202, Method 213, Condition C
<b>Resistance to Soldering Heat</b>	MIL-STD-202, Method 210
<b>Resistance to Solvents</b>	MIL-STD-202, Method 215
<b>Solderability</b>	MIL-STD-883, Method 2003
<b>Temperature Cycling</b>	MIL-STD-883, Method 1010
<b>Vibration</b>	MIL-STD-883, Method 2007, Condition A

# EC1400SJTS-20.000M TR

## MECHANICAL DIMENSIONS (all dimensions in millimeters)



PIN	CONNECTION
1	Tri-State
2	Ground
3	Output
4	Supply Voltage

LINE	MARKING
1	<b>ECLIPTEK</b>
2	<b>20.000M</b>
3	<b>XXYYZZ</b> XX=Ecliptek Manufacturing Code Y=Last Digit of Year ZZ=Week of Year

## Suggested Solder Pad Layout

All Dimensions in Millimeters



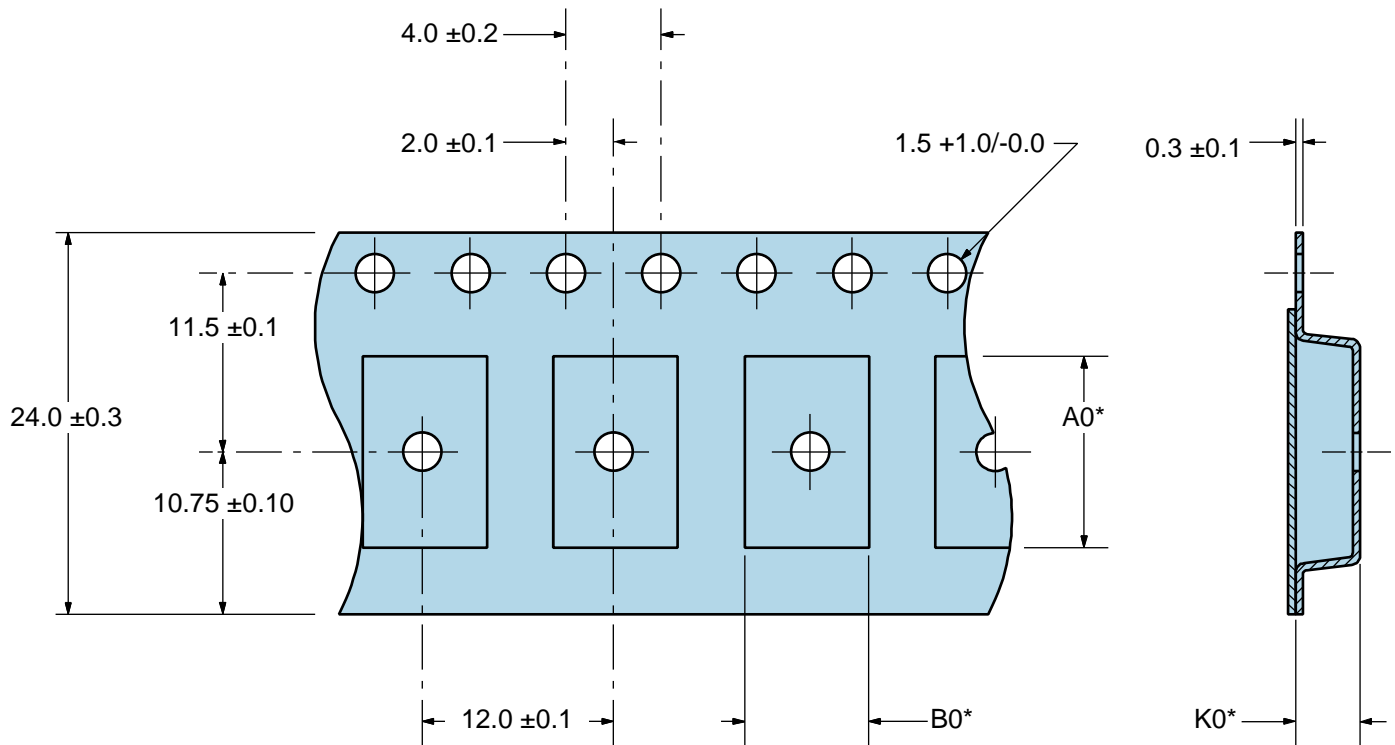
All Tolerances are  $\pm 0.1$

# EC1400SJTS-20.000M TR

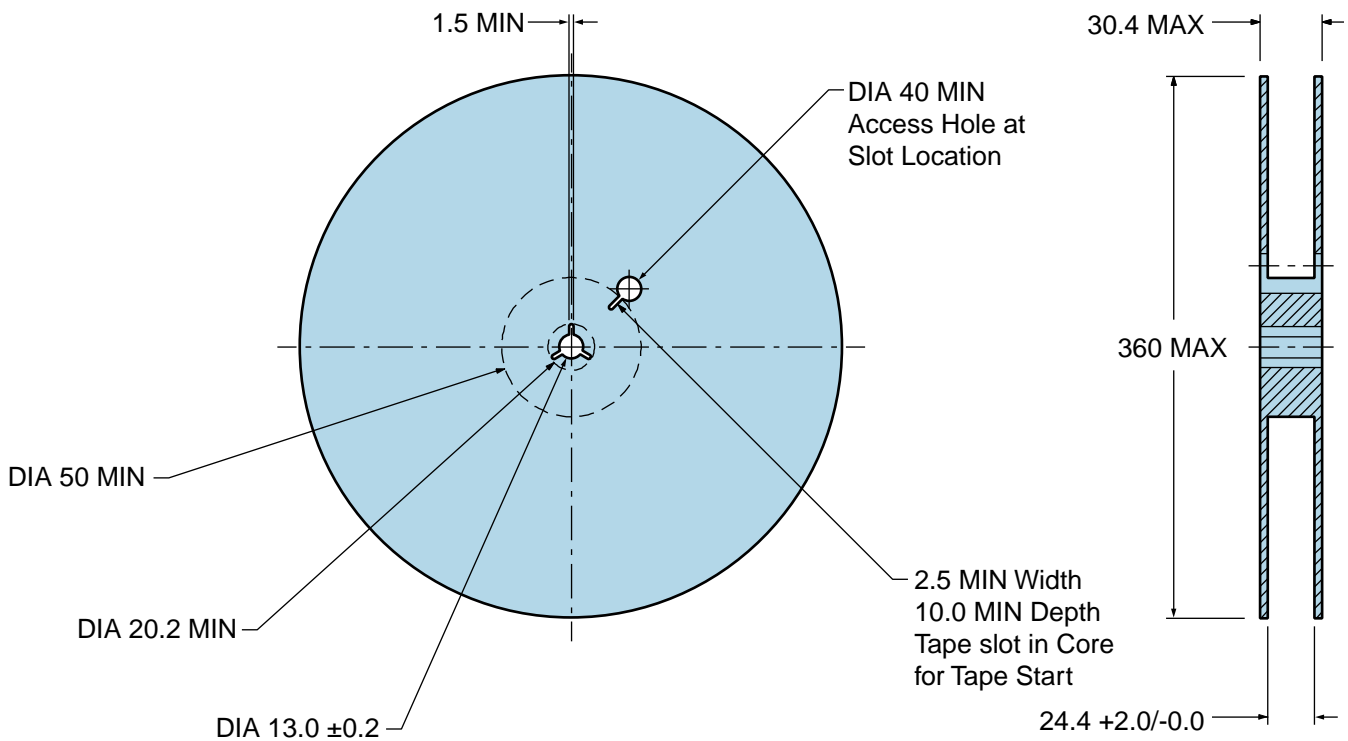


## Tape & Reel Dimensions

Quantity Per Reel: 1,000 units



\*Compliant to EIA 481A



## Recommended Solder Reflow Methods



### Low Temperature Infrared/Convection 240°C

<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)	60 - 120 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>	240°C Maximum
<b>Target Peak Temperature (T<sub>P</sub> Target)</b>	240°C Maximum 1 Time / 230°C Maximum 2 Times
<b>Time within 5°C of actual peak (t<sub>p</sub>)</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

### 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.