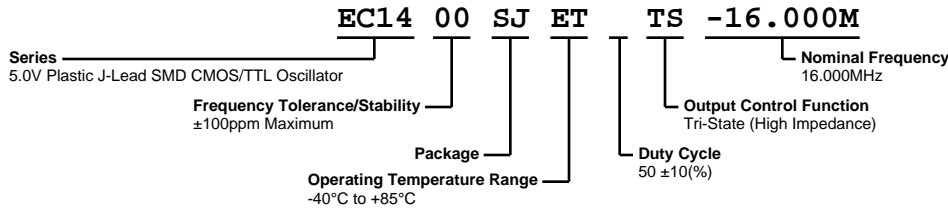


# EC1400SJETS-16.000M



## ELECTRICAL SPECIFICATIONS

Nominal Frequency	16.000MHz
Frequency Tolerance/Stability	$\pm 100$ ppm Maximum (Inclusive of all conditions: Calibration Tolerance at $25^{\circ}\text{C}$ , Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at $25^{\circ}\text{C}$ , Shock, and Vibration)
Aging at $25^{\circ}\text{C}$	$\pm 5$ ppm/year Maximum
Operating Temperature Range	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
Supply Voltage	5.0Vdc $\pm 10\%$
Input Current	23mA Maximum
Output Voltage Logic High (Voh)	Vdd-0.5Vdc Minimum with HCMOS Load, 2.4Vdc Minimum with TTL Load, IOH = -16mA
Output Voltage Logic Low (Vol)	0.4Vdc Maximum with TTL Load, 0.5Vdc Maximum with HCMOS Load, IOL = +16mA
Rise/Fall Time	8nSec Maximum (Measured over 20% to 80% of waveform with HCMOS load or from 0.4Vdc to 2.4Vdc with TTL load.)
Duty Cycle	$50 \pm 10\%$ (Measured at 50% of waveform with HCMOS Load or at 1.4Vdc with TTL Load)
Load Drive Capability	10TTL or 50pF HCMOS Load Maximum
Output Logic Type	HCMOS
Output Control Function	Tri-State (High Impedance)
Tri-State Input Voltage (Vih and Vil)	+2.0Vdc Minimum to enable output, +0.8Vdc Maximum to disable output (High Impedance), No Connect to enable output.
Absolute Clock Jitter	$\pm 100$ pSec Maximum
One Sigma Clock Period Jitter	$\pm 25$ pSec Maximum
Start Up Time	4mSec Maximum
Storage Temperature Range	$-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$

## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
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

# EC1400SJETS-16.000M

## MECHANICAL DIMENSIONS (all dimensions in millimeters)

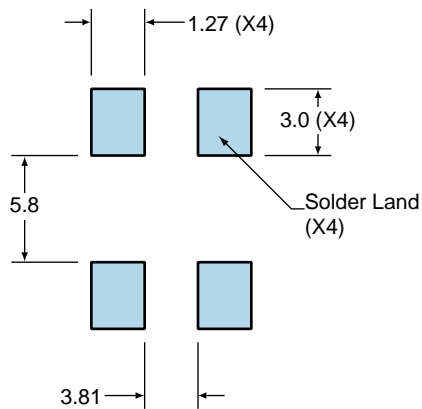


PIN	CONNECTION
1	Tri-State
2	Ground
3	Output
4	Supply Voltage

LINE	MARKING
1	<b>ECLIPTEK</b>
2	<b>16.000M</b>
3	<b>XXYYZ</b> <i>XX=Ecliptek Manufacturing Code</i> <i>Y=Last Digit of Year</i> <i>ZZ=Week of Year</i>

## Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are  $\pm 0.1$

## Recommended Solder Reflow Methods



### Low Temperature Infrared/Convection 240°C

<b><math>T_s</math> MAX to <math>T_L</math> (Ramp-up Rate)</b>	5°C/second Maximum
<b>Preheat</b>	
- 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)	60 - 120 Seconds
<b>Ramp-up Rate (<math>T_L</math> to <math>T_p</math>)</b>	5°C/second Maximum
<b>Time Maintained Above:</b>	
- Temperature ( $T_L$ )	150°C
- Time ( $t_L$ )	200 Seconds Maximum
<b>Peak Temperature (<math>T_p</math>)</b>	240°C Maximum
<b>Target Peak Temperature (<math>T_p</math> Target)</b>	240°C Maximum 1 Time / 230°C Maximum 2 Times
<b>Time within 5°C of actual peak (<math>t_p</math>)</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.