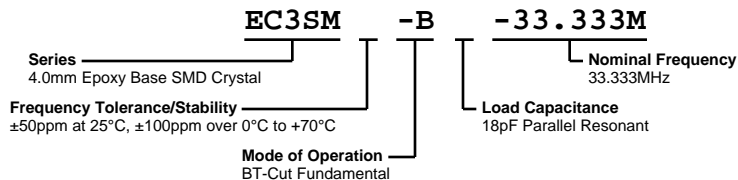


# EC3SM-B-33.333M



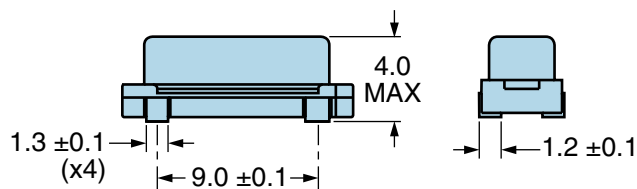
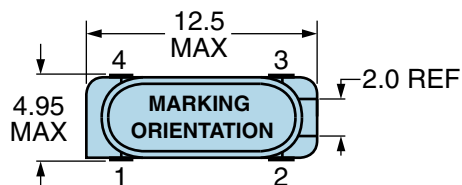
## ELECTRICAL SPECIFICATIONS

Nominal Frequency	33.333MHz
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	18pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	40 Ohms Maximum
Mode of Operation	BT-Cut Fundamental
Drive Level	1mWatts 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
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)



PIN	CONNECTION
1	Crystal
2	Connected to Pin 3
3	Connected to Pin 2
4	Crystal

LINE	MARKING
1	<b>E33.333</b> E=Ecliptek Designator

# EC3SM-B-33.333M

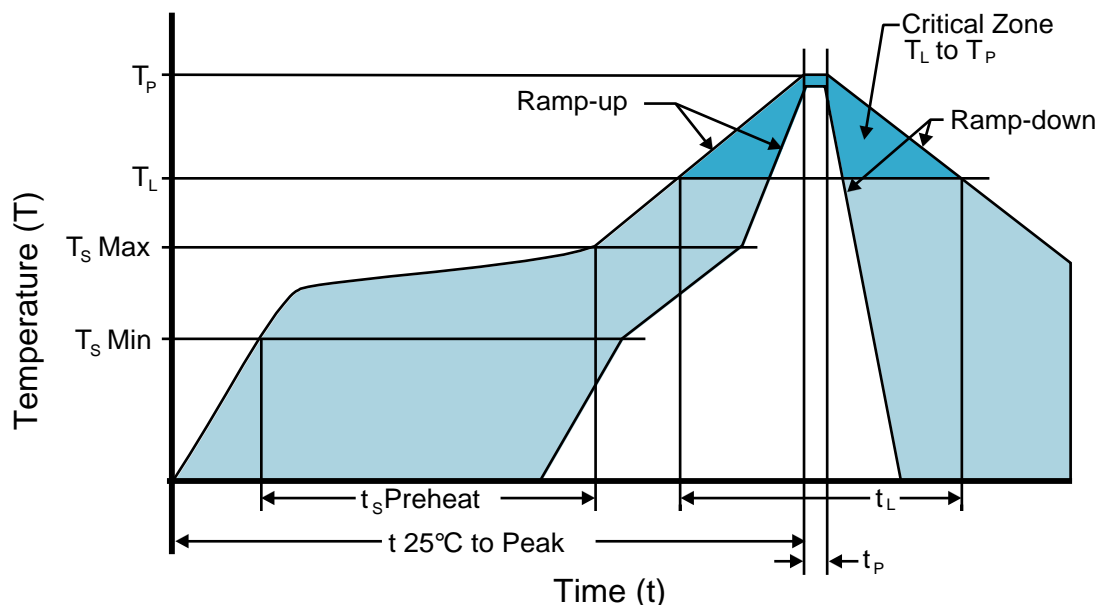
## Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are  $\pm 0.1$

## Recommended Solder Reflow Methods



### Low Temperature Infrared/Convection 225°C

<b><math>T_S</math> MAX to <math>T_L</math> (Ramp-up Rate)</b>	5°C/second Maximum
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#### 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

<b>Ramp-up Rate (<math>T_L</math> to <math>T_P</math>)</b>	5°C/second Maximum
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#### Time Maintained Above:

- Temperature ( $T_L$ )	150°C
- Time ( $t_L$ )	200 Seconds Maximum

<b>Peak Temperature (<math>T_P</math>)</b>	225°C Maximum
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<b>Target Peak Temperature (<math>T_P</math> Target)</b>	225°C Maximum 2 Times
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<b>Time within 5°C of actual peak (<math>t_p</math>)</b>	80 seconds Maximum 2 Times
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<b>Ramp-down Rate</b>	5°C/second Maximum
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<b>Time 25°C to Peak Temperature (t)</b>	N/A
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<b>Moisture Sensitivity Level</b>	Level 1
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### 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.