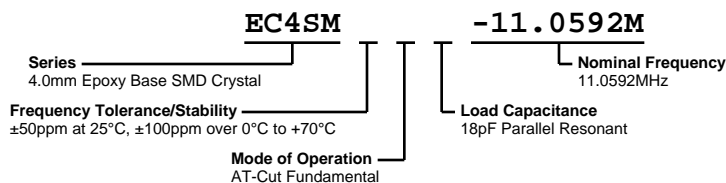


EC4SM-11.0592M



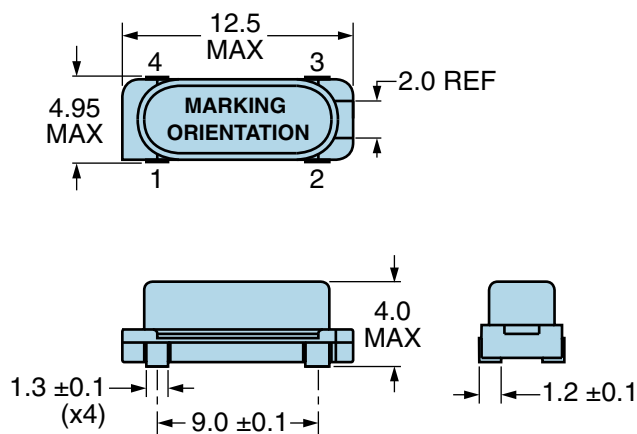
ELECTRICAL SPECIFICATIONS

Nominal Frequency	11.0592MHz
Frequency Tolerance/Stability	$\pm 50\text{ppm}$ at 25°C, $\pm 100\text{ppm}$ over 0°C to +70°C
Aging at 25°C	$\pm 5\text{ppm/year}$ Maximum
Load Capacitance	18pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	70 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	1mWatts Maximum
Storage Temperature Range	-40°C to +85°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	Connected to Pin 4 and to Crystal
2	Connected to Pin 3 and to Crystal
3	Connected to Pin 2 and to Crystal
4	Connected to Pin 1 and to Crystal

LINE	MARKING
1	E11.059 E=Ecliptek Designator

EC4SM-11.0592M

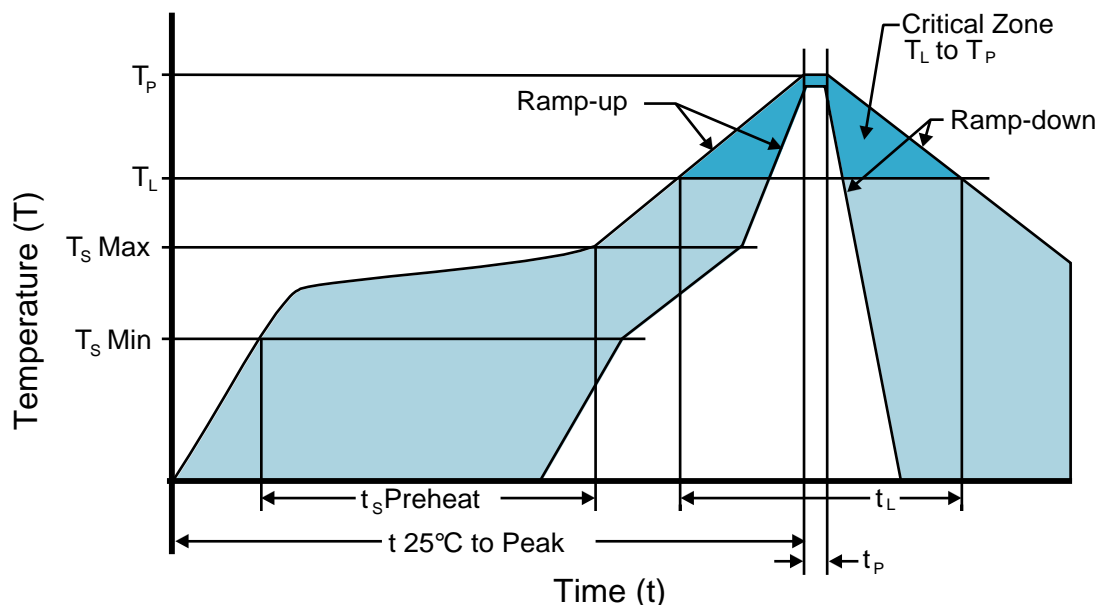
Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are ± 0.1

Recommended Solder Reflow Methods



Low Temperature Infrared/Convection 225°C

T_S MAX to T_L (Ramp-up Rate)	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

Ramp-up Rate (T_L to T_P)	5°C/second Maximum
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Time Maintained Above:

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

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