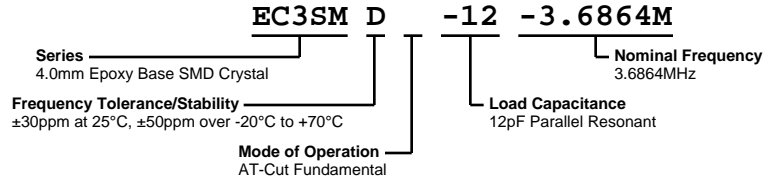


# EC3SMD-12-3.6864M



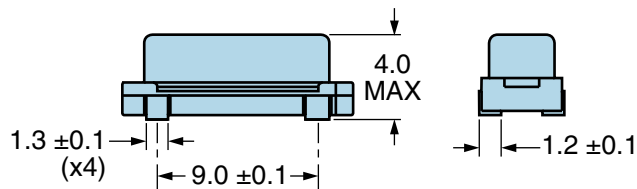
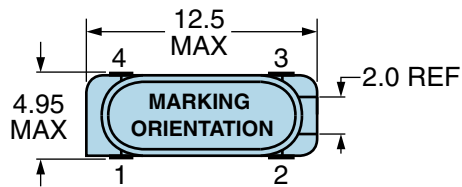
## ELECTRICAL SPECIFICATIONS

Nominal Frequency	3.6864MHz
Frequency Tolerance/Stability	$\pm 30\text{ppm}$ at 25°C, $\pm 50\text{ppm}$ over -20°C to +70°C
Aging at 25°C	$\pm 5\text{ppm/year}$ Maximum
Load Capacitance	12pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	200 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	Crystal
2	Connected to Pin 3
3	Connected to Pin 2
4	Crystal

LINE	MARKING
1	<b>E3.6864</b> E=Ecliptek Designator

# EC3SMD-12-3.6864M

## Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are  $\pm 0.1$

## Recommended Solder Reflow Methods



### Low Temperature Infrared/Convection 225°C

$T_S$  MAX to  $T_L$  (Ramp-up Rate) 5°C/second Maximum

#### 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 ( $T_P$ ) 225°C Maximum

Target Peak Temperature ( $T_P$  Target) 225°C Maximum 2 Times

Time within 5°C of actual peak ( $t_p$ ) 80 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.