

EC4SM-12-14.31818M
[Click part number to visit Part Number Details page](#)
REGULATORY COMPLIANCE (Data Sheet downloaded on Sep 25, 2016)**ITEM DESCRIPTION**

Quartz Crystal Resonator HC49/UP 4 Pad Surface Mount (SMD) 4.0mm Height Metal Resistance Weld Seal 14.31818MHz ± 50 ppm at 25°C, ± 100 ppm over 0°C to +70°C 12pF Parallel Resonant

ELECTRICAL SPECIFICATIONS

Nominal Frequency	14.31818MHz
Frequency Tolerance/Stability	± 50 ppm at 25°C, ± 100 ppm over 0°C to +70°C
Aging at 25°C	± 5 ppm/year Maximum
Load Capacitance	12pF 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

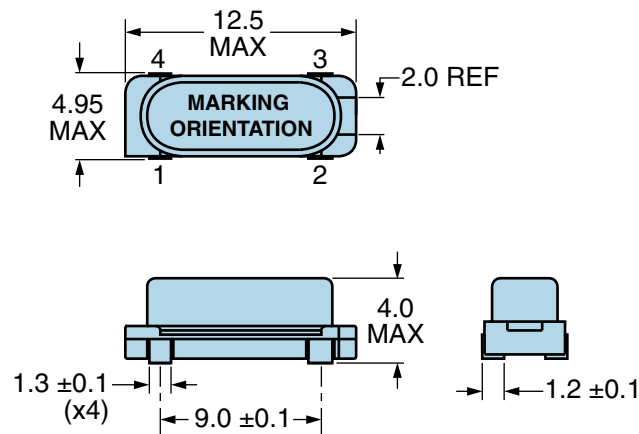
ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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

EC4SM-12-14.31818M

 Click part number to visit
Part Number Details page

MECHANICAL DIMENSIONS (all dimensions in millimeters)

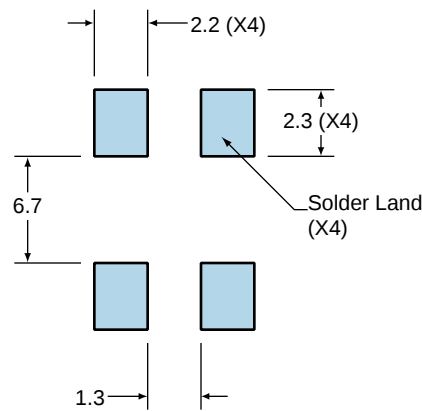


PIN	CONNECTION
1	Connected to Pin 4 and to Crystal
2	Connected to Pin 3 and to Crystal
3	Connected to Pin 2 and to Crystal
4	Connected to Pin 1 and to Crystal

LINE	MARKING
1	E14.318 <i>E=Ecliptek Designator</i>

Suggested Solder Pad Layout

All Dimensions in Millimeters

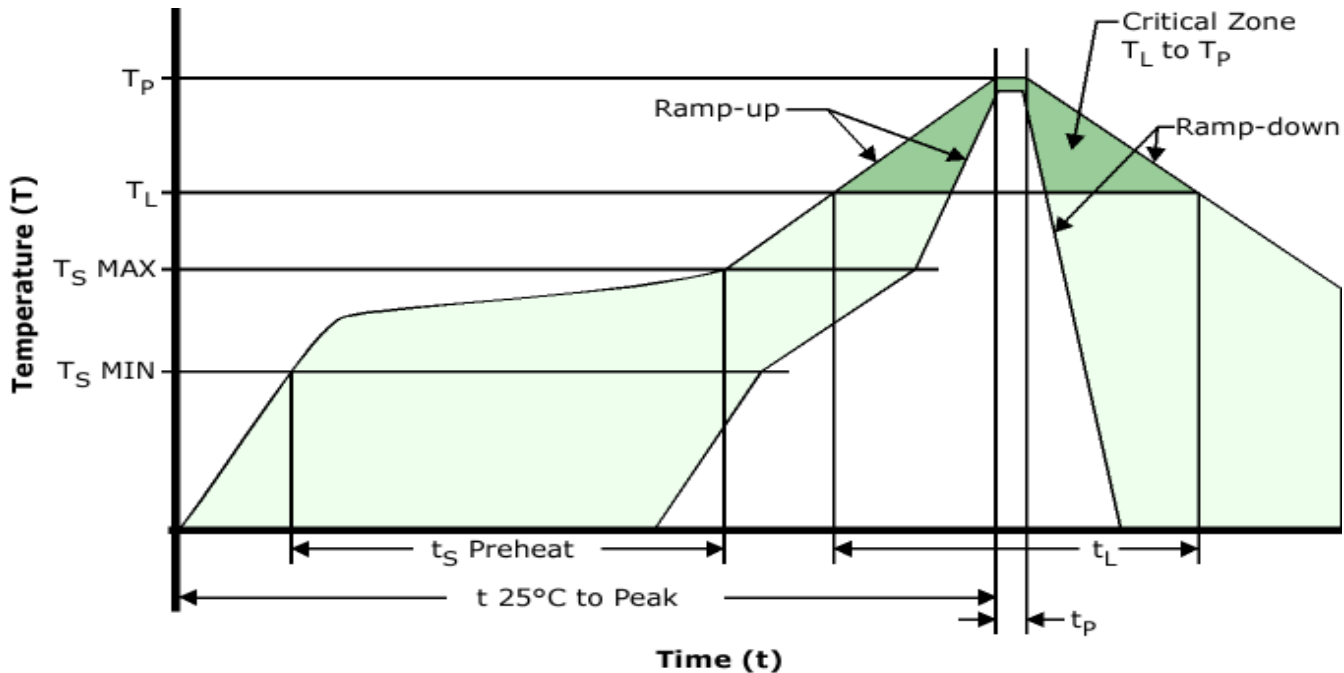


All Tolerances are ±0.1

EC4SM-12-14.31818M

[Click part number to visit Part Number Details page](#)

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.