

EC3SME-24.000M TR

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

REGULATORY COMPLIANCE (Data Sheet downloaded on Dec 31, 2018)



ITEM DESCRIPTION

Quartz Crystal Resonator HC49/UP 4 Pad Surface Mount (SMD) 4.0mm Height Metal Resistance Weld Seal 24.000MHz ± 30 ppm at 25°C, ± 50 ppm over -40°C to +85°C 18pF Parallel Resonant

ELECTRICAL SPECIFICATIONS

Nominal Frequency	24.000MHz
Frequency Tolerance/Stability	± 30 ppm at 25°C, ± 50 ppm over -40°C to +85°C
Aging at 25°C	± 5 ppm/year Maximum
Load Capacitance	18pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	40 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

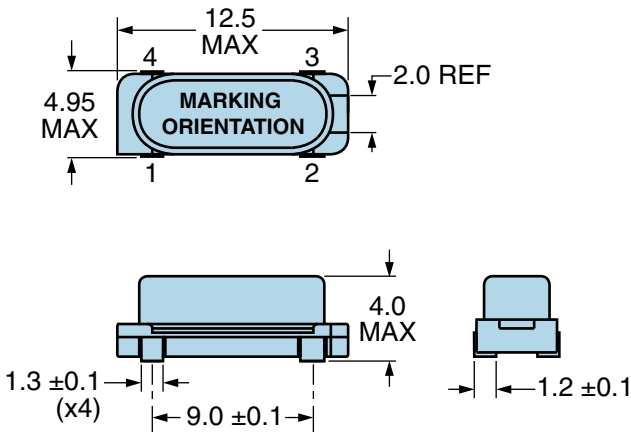
ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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

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MECHANICAL DIMENSIONS (all dimensions in millimeters)

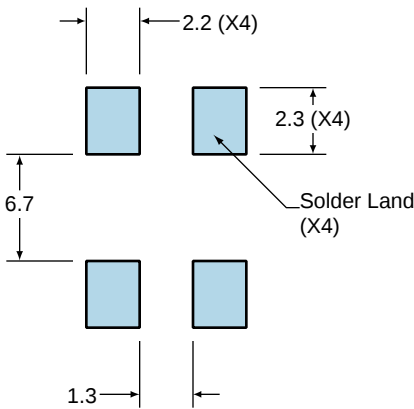


PIN	CONNECTION
1	Crystal
2	Connected to Pin 3
3	Connected to Pin 2
4	Crystal

LINE	MARKING
1	E24.000 <i>E=Ecliptek Designator</i>

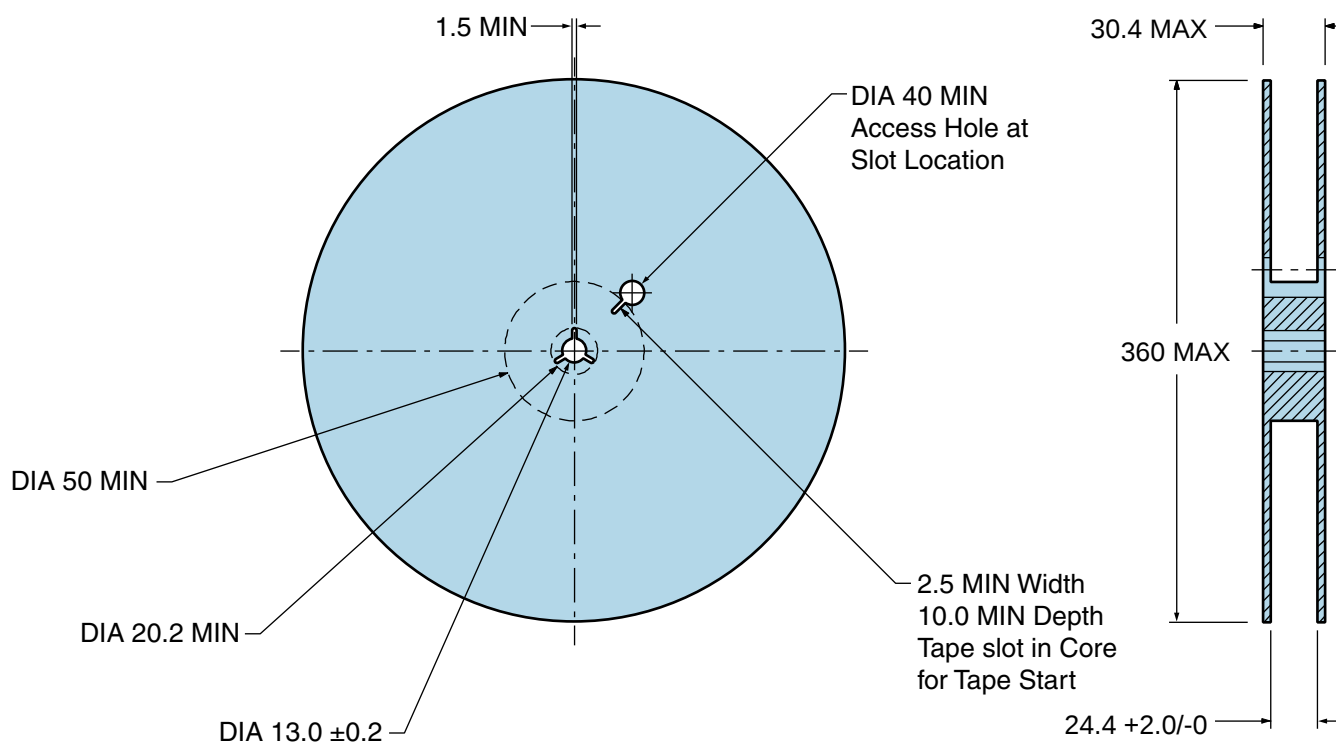
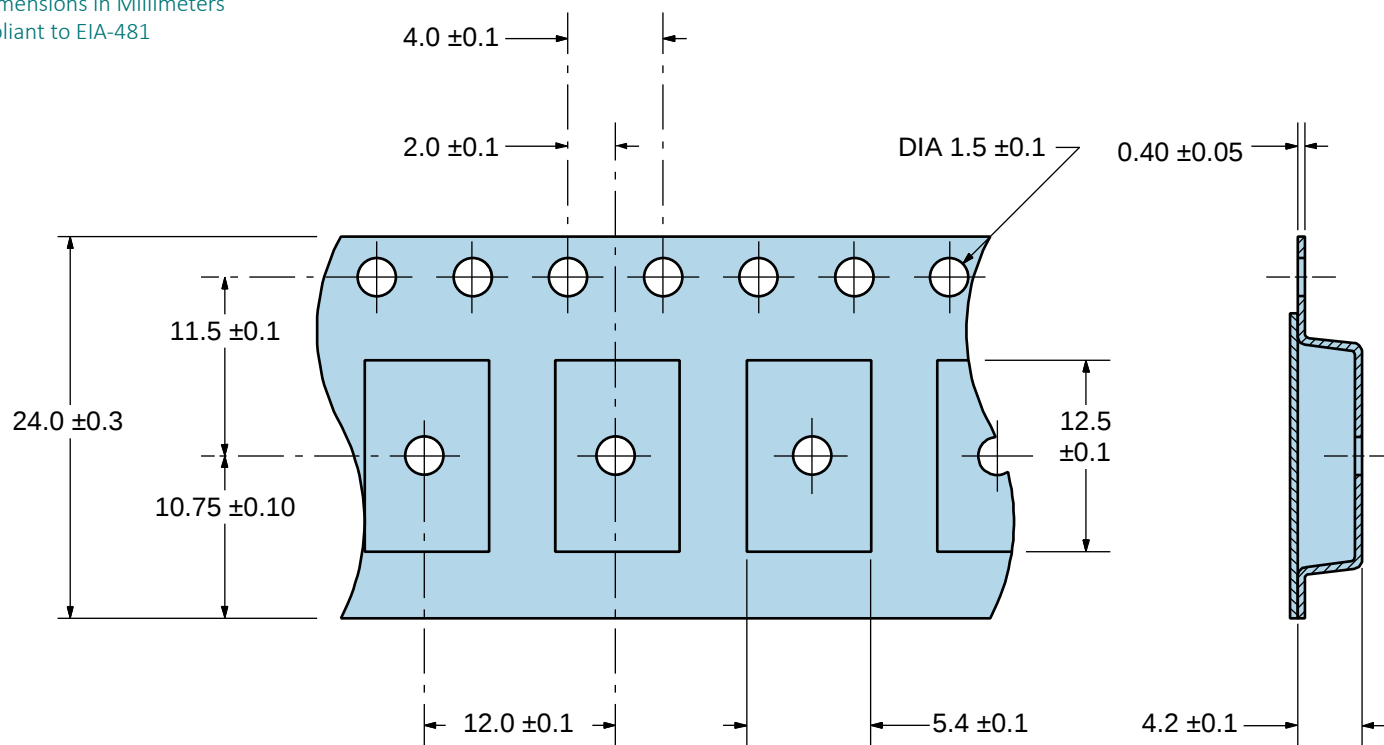
Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are ±0.1

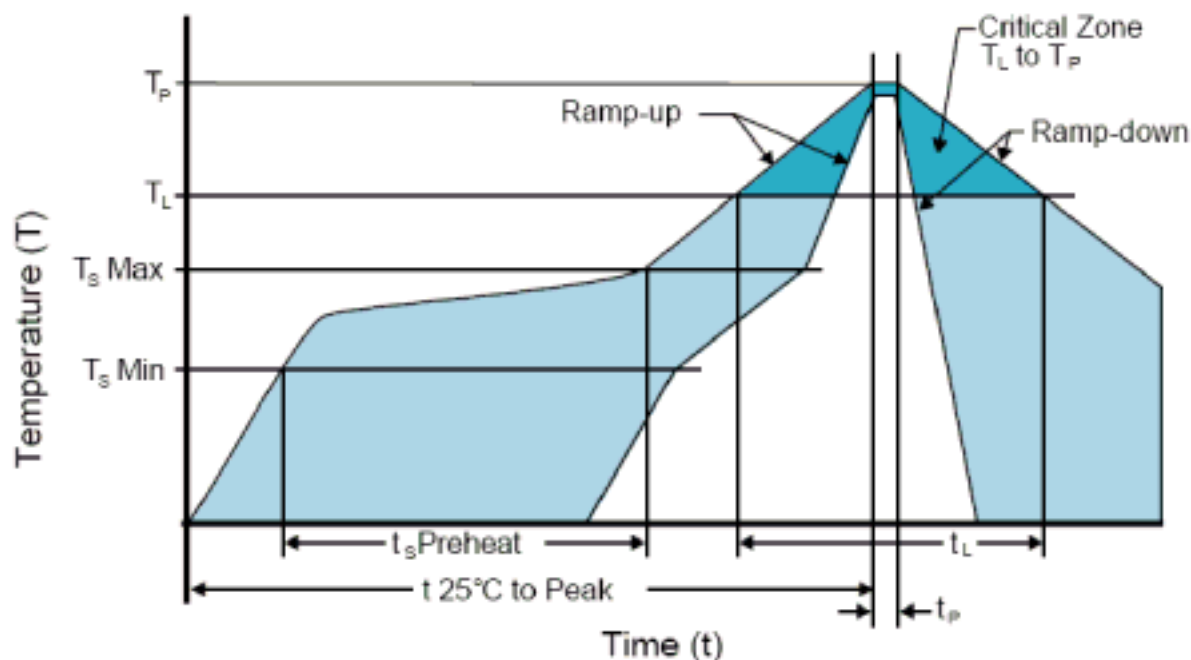
All Dimensions in Millimeters
Compliant to EIA-481



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Recommended Solder Reflow Methods



Low Temperature Infrared/Convection 225°C

Ts MAX to TL (Ramp-up Rate) 5°C/Second Maximum

Preheat

- Temperature Minimum (Ts MIN) N/A
- Temperature Typical (Ts TYP) 150°C
- Temperature Maximum (Ts MAX) N/A
- Time (ts MIN) 30 - 60 Seconds

Ramp-up Rate (TL to TP) 5°C/Second Maximum

Time Maintained Above:

- Temperature (TL) 150°C
- Time (tL) 200 Seconds Maximum

Peak Temperature (TP) 225°C Maximum

Target Peak Temperature (TP Target) 225°C Maximum 2 Times

Time within 5°C of actual peak (tp) 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.