

EA5070 Series Crystal

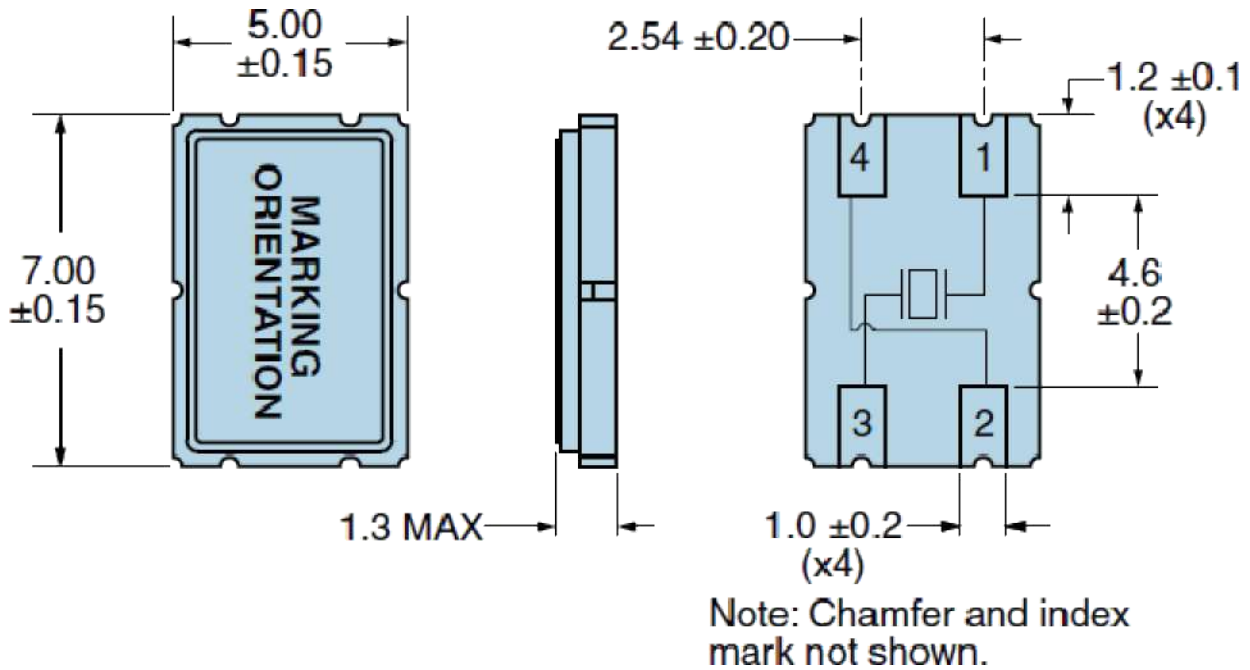
Quartz Crystal Resonator 5.0mm x 7.0mm x 1.3mm 4 Pad Ceramic Surface Mount (SMD)



Electrical Specifications

Nominal Frequency	6.000MHz to 66.000MHz <i>Some frequencies within this range may not be available.</i>
Frequency Tolerance (at 25°C)	±50ppm Maximum ±30ppm Maximum ±15ppm Maximum ±10ppm Maximum
Frequency Stability (over Operating Temperature Range)	±100ppm Maximum ±50ppm Maximum ±30ppm Maximum ±20ppm Maximum ±15ppm Maximum
Operating Temperature Range	0°C to +70°C -20°C to +70°C -40°C to +85°C
Load Capacitance	12pF to 50pF Parallel Resonant Series Resonant
Equivalent Series Resistance	Click to Open ESR Table
Shunt Capacitance	7pF Maximum
Mode of Operation	Fundamental or Third Overtone
Crystal Cut	AT
Storage Temperature Range	-40°C to +85°C
Drive Level	50µWatts Maximum
Spurious Response	Measured from Fo to Fo +5000ppm -3dB Minimum
Aging (at 25°C)	±3ppm/year Maximum
Insulation Resistance	Measured at 100V _{DC} 500 Megaohms Minimum

Mechanical Dimensions



All Dimensions in Millimeters

Marking Specifications

Line 1: **EXX.XX**

E = Ecliptek Designator

XX.XX = Nominal Frequency in MHz (4 Digits Maximum + Decimal)

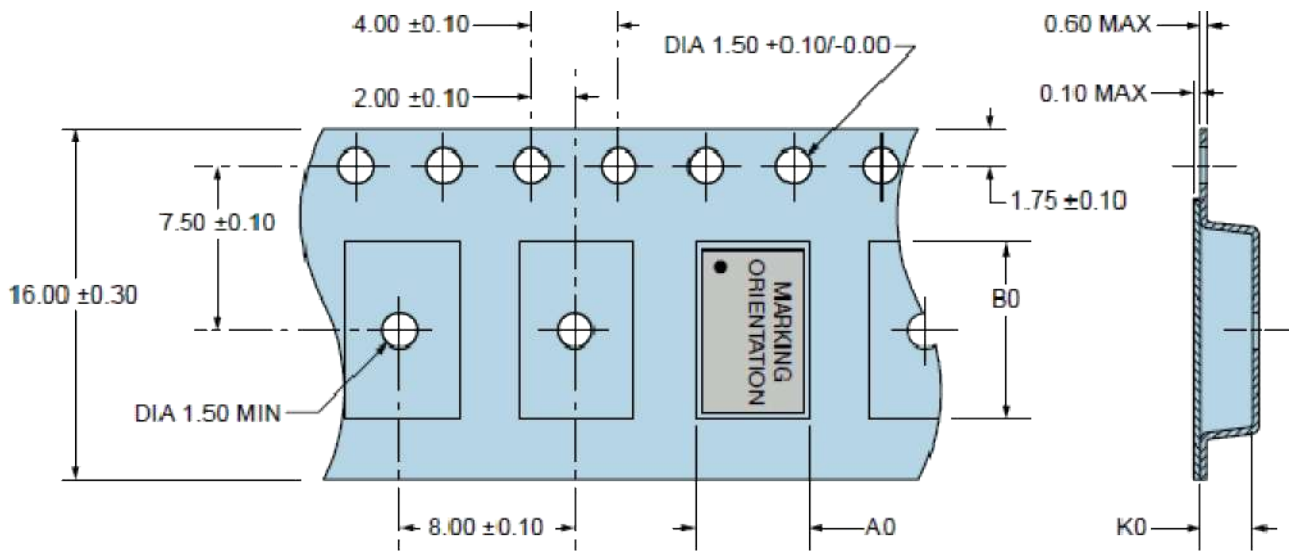
Line 2: **XXXXXX**

XXXXXX = Ecliptek Manufacturing Identifier

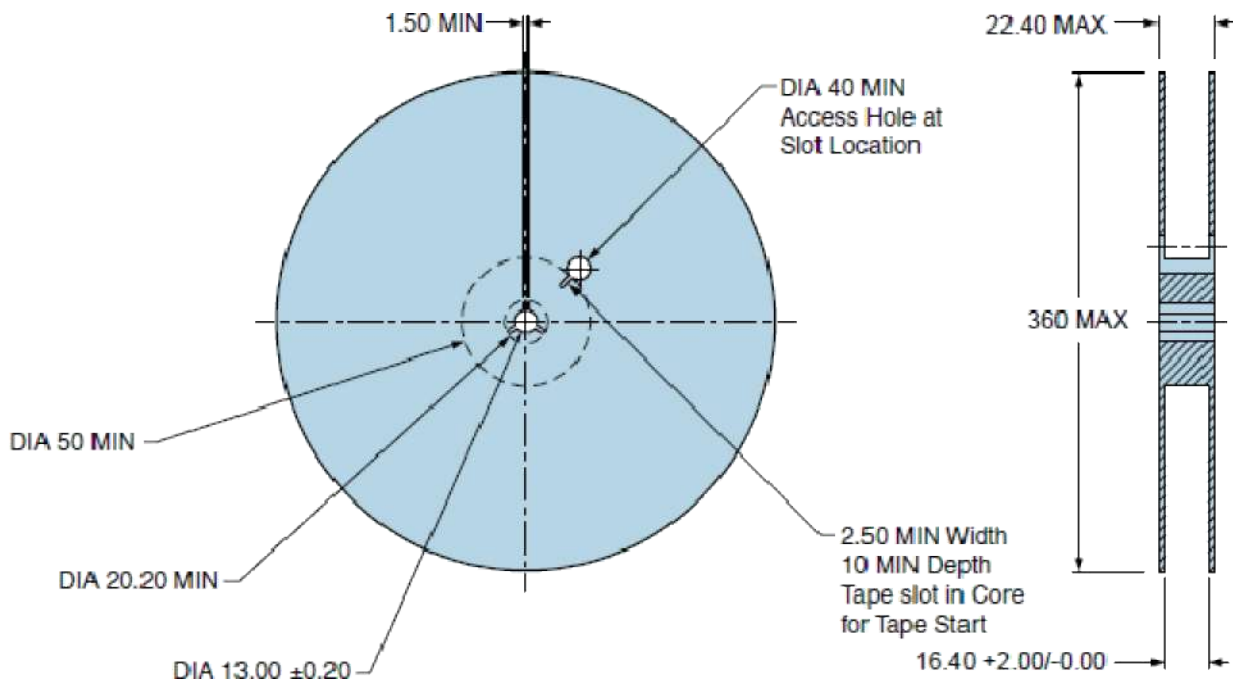
Environmental and Mechanical Specifications

ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

Tape & Reel Dimensions



Direction of Unreeling



1000 pieces per reel
Compliant to EIA-481
All Dimensions in Millimeters

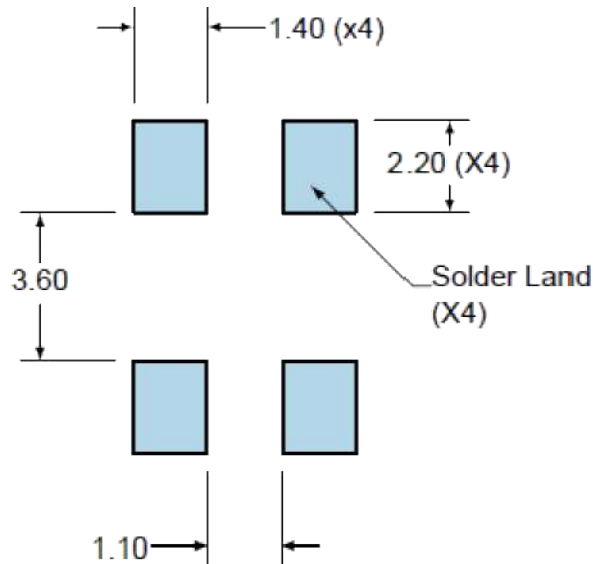
Fundamental Mode AT Cut

Nominal Frequency Range in MHz	Maximum ESR in Ohms
6.000000 to 9.999999	90
10.000000 to 10.999999	60
11.000000 to 13.999999	50
14.000000 to 15.999999	40
16.000000 to 40.000000	30

Third Overtone Mode AT Cut

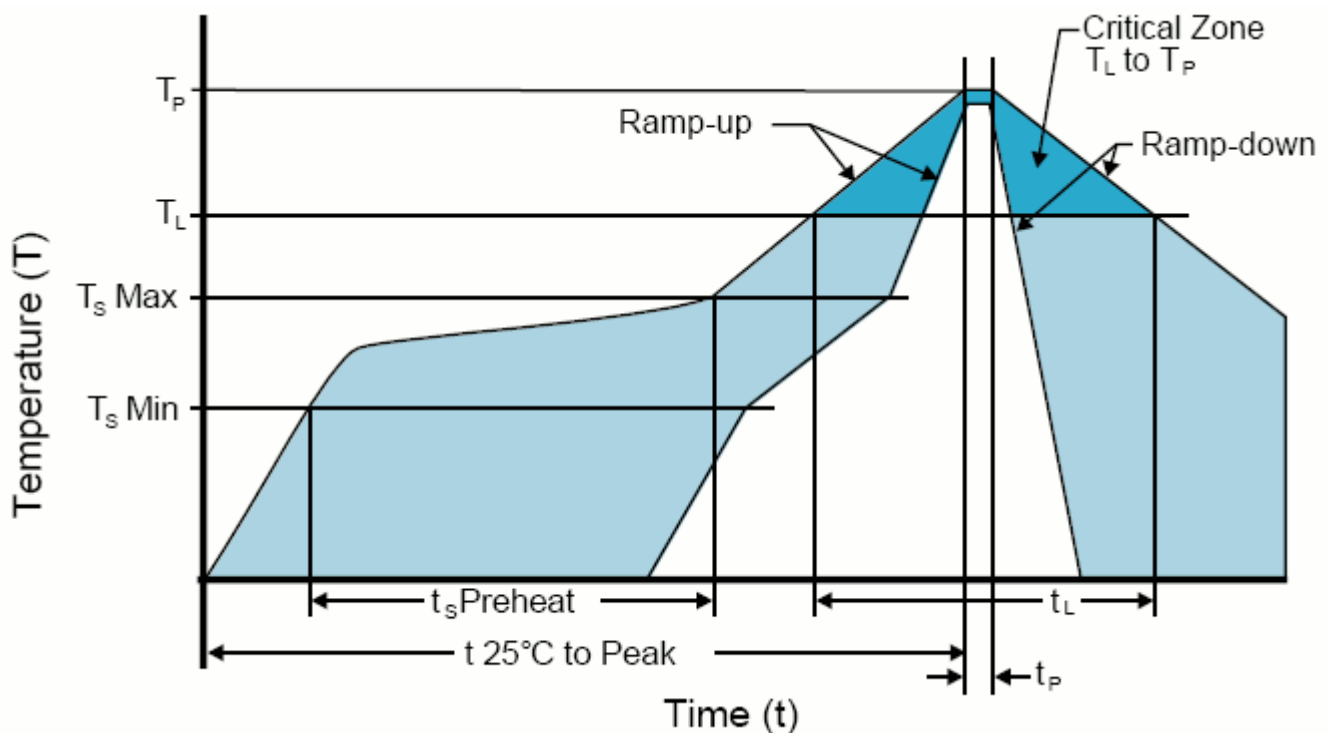
Nominal Frequency Range in MHz	Maximum ESR in Ohms
35.328000 to 39.999999	100
40.000000 to 66.000000	80

Recommended Solder Pad Dimensions



Tolerances = ± 0.1
 All Dimensions in Millimeters

Solder Reflow Profile



High Temperature Infrared/Convection

Note: Temperatures shown are applied to body of device.

T_S MAX to T_L (Ramp-up Rate)	3°C/second Maximum
Preheat	
- Temperature Minimum (T _S MIN)	150°C
- Temperature Typical (T _S TYP)	175°C
- Temperature Maximum (T _S MAX)	200°C
- Time (t _s)	60 - 180 Seconds
Ramp-up Rate (T_L to T_P)	3°C/second Maximum
Time Maintained Above:	
- Temperature (T _L)	217°C
- Time (t _L)	60 - 150 Seconds
Peak Temperature (T_P)	260°C Maximum for 10 Seconds Maximum
Target Peak Temperature (T_P Target)	250°C +0/-5°C
Time within 5°C of actual peak (t_p)	20 - 40 seconds
Ramp-down Rate	6°C/second Maximum
Time 25°C to Peak Temperature (t)	8 minutes Maximum
Moisture Sensitivity Level	Level 1

Low Temperature Infrared/Convection

Note: Temperatures shown are applied to body of device.

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)	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)	245°C Maximum
Target Peak Temperature (T_P Target)	245°C Maximum 2 Times / 230°C

	Maximum 1 Time
Time within 5°C of actual peak (t_p)	10 seconds Maximum 2 Times / 80 seconds Maximum 1 Time
Ramp-down Rate	5°C/second Maximum
Time 25°C to Peak Temperature (t)	N/A
Moisture Sensitivity Level	Level 1

High Temperature Manual Soldering

Note: Temperatures listed are applied to body of device.
260°C Maximum for 5 seconds Maximum, 2 times Maximum.

Low Temperature Manual Soldering

Note: Temperatures listed are applied to body of device.
185°C Maximum for 10 seconds Maximum, 2 times Maximum.

Внимание: описание товара носит информационный характер и может отличаться от описания, представленного в технической документации производителя. Убедительно просим Вас при покупке проверять наличие желаемых функций и характеристик.



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