

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

Electrical Specifications:

Frequency Range		16.000 to 96.000	MHz
Mode of Oscillation	Fundamental	16.000 to 96.000	MHz
Frequency Tolerance at 25°C	Standard	±30	PPM Max (Note 1)
	Optional	±25	
		±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max (Note 1)
	Optional	±30	
		±25	
		±20	
		±15	
Operating Temperature Range	Standard	-20 to +70	°C
	Extended	-40 to +85	
Storage Temperature Range		-55 to +125	
Aging		±3	PPM Max/Year
Load Capacitance		6 to 47 and Series Resonance	pF
Shunt Capacitance			
Equivalent Series Resistance(ESR)		See ESR Table	Ohm
Drive Level		100	uW Max
Insulation Resistance		500 at 100 Vdc ± 15 Vdc	M Ohm

Frequency Range and ESR Values:

Frequency Range in MHz	ESR Ohm Max	Mode of Operation
16.000 to 19.199	200	Fundamental
19.200 to 25.999	100	Fundamental
26.000 to 35.999	80	Fundamental
36.000 to 79.999	60	Fundamental
80.000 to 96.000	40	Fundamental



O 11-3, Jianguo Rd., Tanzi Dist., Taichung City 427, Taiwan

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

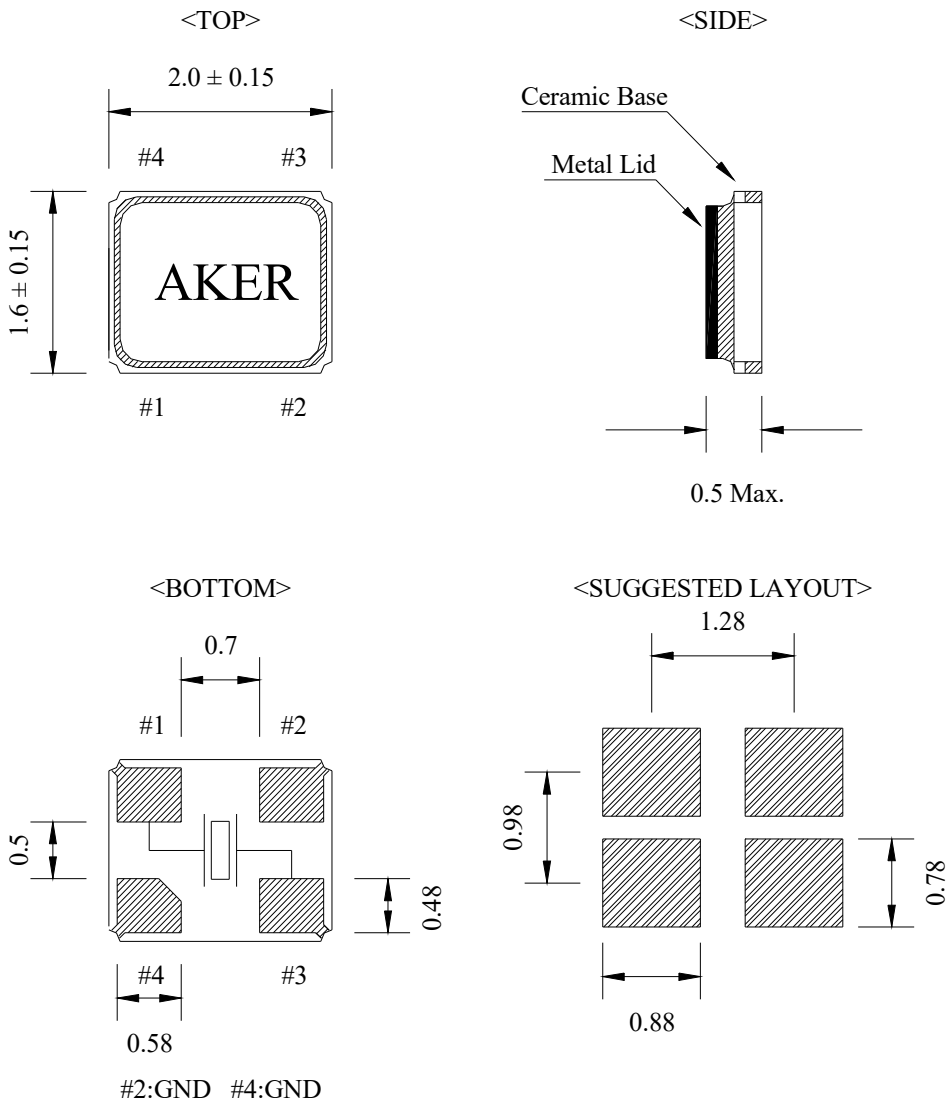
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Specification Title:

**Microprocessor Crystal Unit
Low Profile
2.0 x 1.6 millimeter Surface Mount
General Product Specification**

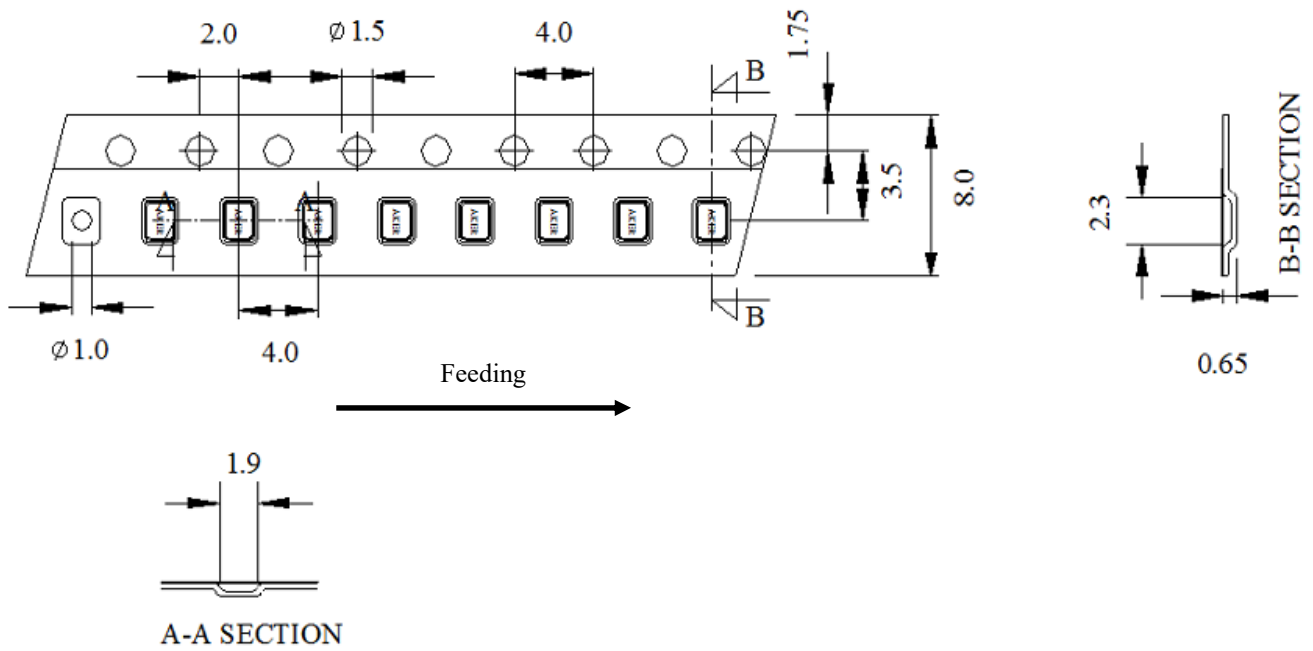
Part Number: C1E Series

Mechanical Outline:



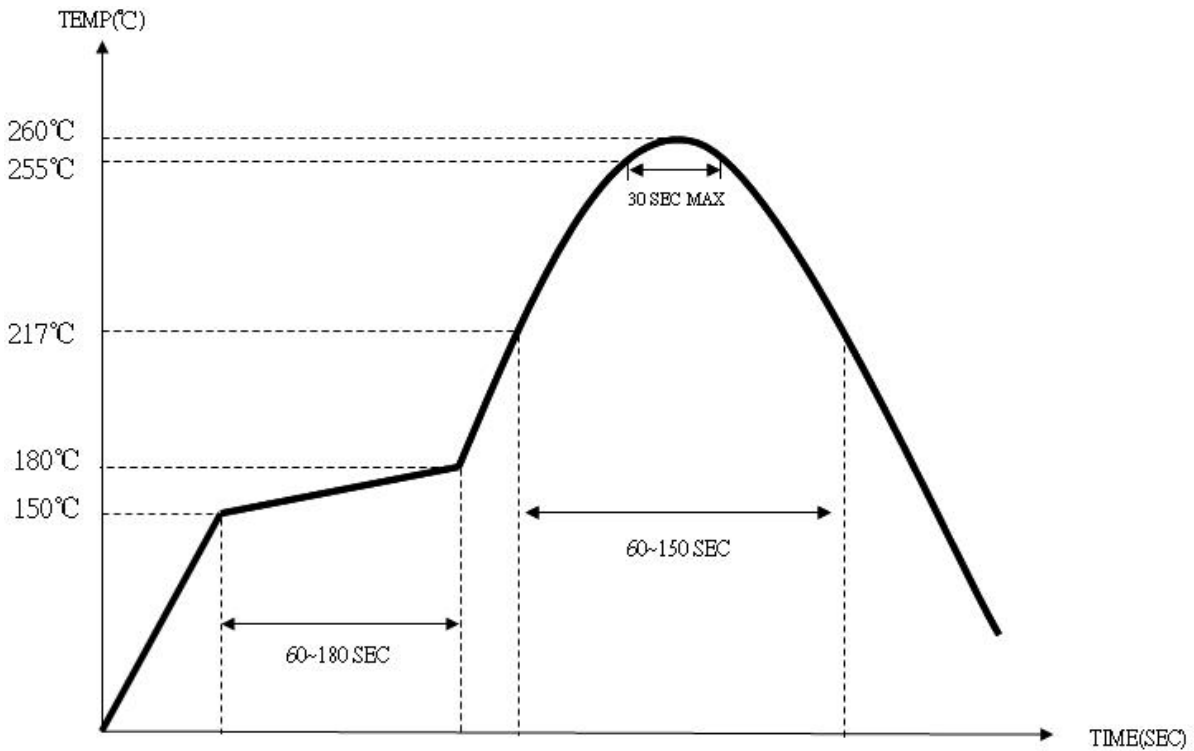
**Package is Seam Sealed Ceramic-Metal.
Dimensions are millimeters.**

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series		C	Parameter
Package		1E	2.0 x 1.6 mm
-			
Frequency		16.000 to 96.000	MHz
-			
Load Capacitance	7		7pF
	10		10 pF
	12		12 pF
	16		16 pF
	18		18 pF
	20		20 pF
	32		32 pF
	S		Series
-			
Frequency Tolerance (Note 1)	Standard	30	±30PPM
	Option	25	±25PPM
		20	±20PPM
		15	±15PPM
		10	±10PPM
Frequency Stability (Note 1)	Standard	50	±50PPM
	Option	30	±30PPM
		25	±25PPM
		20	±20PPM
		15	±15PPM
-			
Temperature Range	Standard	See Notes	-20 to +70 °C
	Option	X	-40 to +85 °C
	Option		
-			
Packaging	M		250pcs Reel
	R		1000pcs Reel
	R3		3000pcs Reel

Part Number Example:

C1E-50.000-10-3050-R3

C1E- 2.0 x 1.6 mm SMD Seam Seal Crystal Unit

50.000 MHz Nominal Frequency

10 pF Load Capacitance

3050: ±30 PPM Frequency Tolerance and ±50 PPM Frequency Stability

Fundamental Mode

-20 to +70°C Temperature Range

R3: Tape and Reel Packaging - 3000pcs

Notes:

- 1- Frequency Tolerance and Stability options are limited due to physical size.
- 2- Standard Temperature Range does not need to be included in Part Number description.
- 3- Product is shipped in Tape and Reel configuration.
- 4- Quantities less than 250pcs are shipped in tape only.
- 5- Specification subject to change without notice.

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