## RoHS Compliant Pb - Lead Free

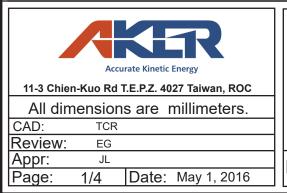
Ltr	Revisions	Date	Appr

## **Electrical Specifications:**

Frequency Range		16.000 to 54.000	MHz	
Mode of Oscillation	Fundamental	16.000 to 54.000	MHZ	
	Standard	±30		
		±25	DDM Man	
Frequency Tolerance at 25°C	Ontional	±20	PPM Max (Note 1)	
	Optional -	±15		
		±10		
	Standard	±50	PPM Max (Note 1)	
Fire access on Ottobility access	Optional	±30		
Frequency Stability over Temperature Range		±25		
remperature Kange		±20		
		±15*		
Operating Temperature Benge	Standard	-10 to +70		
Operating Temperature Range —	Extended	-40 to +85	۰c	
Storage Temperature Range		-55 to +125	]	
Aging		±3	PPM Max/Year	
Load Capacitance		7 to 32 and Series Resonance		
Shunt Capacitance		3.0 pF		
Equivalent Series Resistance (ESR)		See ESR Table	Ohm	
Drive Level		100	uW Max	
Insulation Resistance		500 at 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 54.000	60	Fundamental

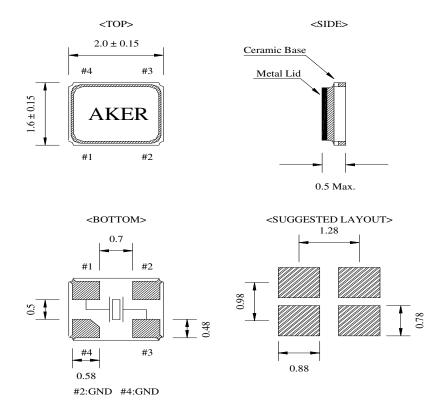


# Specification Title:

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

Part Number: C1E Series

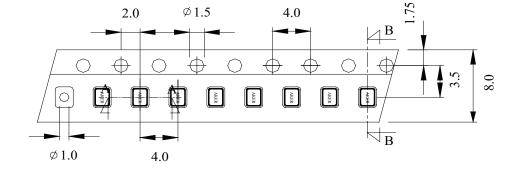
## **Mechanical Outline:**

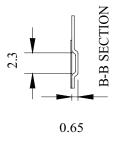


Package is Seam Sealed Ceramic-Metal. Dimensions are millimeters.

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# **Carrier Tape Dimensions:**

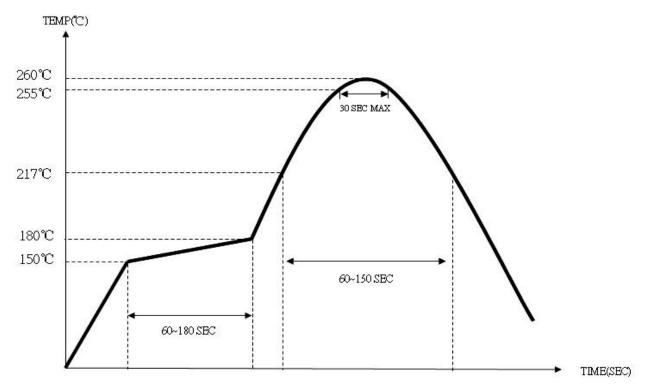






Dimensions are millimeters.

## **Solder Reflow Characteristics:**



#### How to build a Part Number:

Series		С	Parameter
Package		1E	1.6 x 2.0 mm Seam Seal
_		-	
Frequency		16.000 to 54.000	MHz
		-	
		7	7 pF
		10	10 pF
		12	12 pF
Load Capacitance		16	16 pF
2000	apuoiturioo	18	18 pF
		20	20 pF
		32	32 pF
		S	Series
		-	
	Standard	30	±30 PPM
Frequency Tolerance		25	±25 PPM
(Note 1)	Option	20	±20 PPM
(11010 1)	Option	15	± 15 PPM
		10	±10 PPM
	Standard	50	±50 PPM
Frequency Stability	Option	30	±30 PPM
(Note 1)		25	±25 PPM
(Note 1)		20	±20 PPM
		15	±15 PPM*
	-	-	
Temperature Range	Standard	See Notes	-10 to +70 °C
i omporatare italige	Extended	X	-40 to +85 °C
		-	
		M	250pcs Reel
Packaging		R	1000pcs Reel
		R3	3000pcs Reel

### **Part Number Example:**

C1E-50.000-10-3050-R3

C1E- 1.6 x 2.0 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** 

-10 to +70° C Temperature Range

R3: Tape and Reel Packaging - 3000pcs

#### Notes:

- 1- Frequency Tolerance and Stability options are limited due to physical size.
  - \* ±15 PPM Temperature Stability is only available from -30 to +85° C.
- 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 250 are shipped in tape only.
- 5- Specification subject to change without notice.

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