

RoHS Compliant Pb - Lead Free AEC-Q200 Qualified	Ltr	Revisions	Date	Appr

Electrical Specifications:

Frequency Range		16.000 to 54.000	MHz
Mode of Oscillation	Fundamental	16.000 to 54.000	MHz
Frequency Tolerance at 25°C		±50	PPM Max (Note 1)
Frequency Stability over Temperature Range		±100	
Operating Temperature Range		-40 to +125	°C
Storage Temperature Range		-55 to +150	
Aging		±3	PPM Max/Year
Load Capacitance		7 to 32 and Series Resonance	pF
Shunt Capacitance		3.0	
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 54.000	60	Fundamental



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

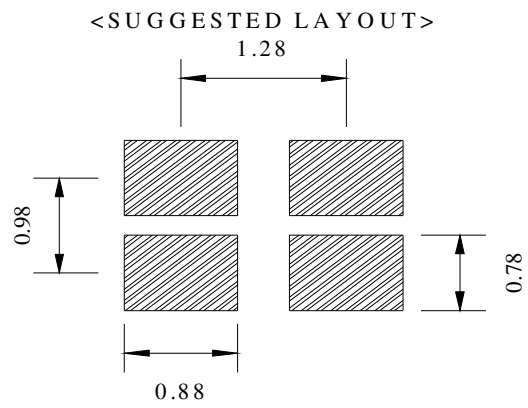
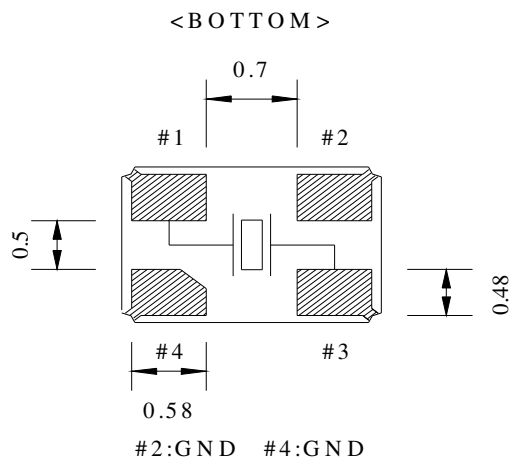
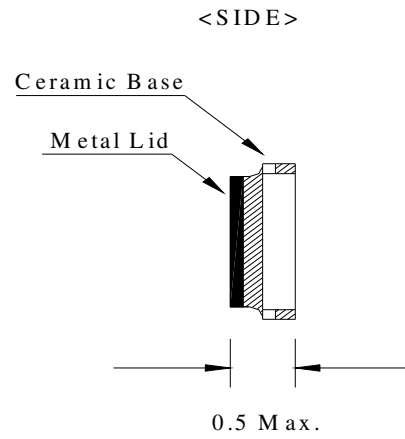
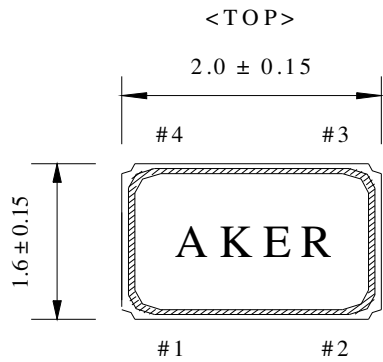
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Specification Title:

**Microprocessor Crystal Unit
Automotive Temperature Range
1.6 x 2.0 millimeter Surface Mount
General Product Specification**

Part Number: C1E X1 Series

Mechanical Outline:



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

How to build a Part Number:

Series	C	Parameter
Package	1E	1.6 x 2.0 mm Seam Seal
	-	
Frequency	16.000 to 54.000	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)	50	±50PPM
Frequency Stability (Note 1)	100	±100PPM
	-	
Temperature Range	X1	-40 to +125 °C
	-	
Packaging	R	Tape and Reel

Part Number Example:

C1E-50.000-10-50100-X1-R

C1E- 1.6 x 2.0 mm SMD Seam Seal Crystal Unit

50.000 MHz Nominal Frequency

10 pF Load Capacitance

50100: ±50 PPM Frequency Tolerance and ±100 PPM Frequency Stability

Fundamental Mode

X1: -40 to +125° C Automotive Temperature Range

R: Tape and Reel Packaging

Notes:

- 1- Frequency Tolerance and Stability options are limited due to physical size.**
- 2- Product is shipped in Tape and Reel configuration.**
- 4- Quantities less than 3000 are shipped bulk in ESD pouches.**
- 5- Specification subject to change without notice.**

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