

RoHS Compliant  
Pb - Lead Free  
AEC-Q200 Qualified

Ltr	Revisions	Date	Appr

### Electrical Specifications:

Frequency Range		24.000 to 48.000	
Mode of Oscillation	Fundamental	24.000 to 48.000	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 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 ± 15Vdc	M Ohm

### Frequency Range and ESR Values:

Frequency Range in MHz	ESR Ohm Max	Mode of Operation
24.000 to 29.999	150	Fundamental
30.000 to 36.999	100	Fundamental
37.000 to 48.000	80	Fundamental



11-3 Chien-Kuo Rd T.E.P.Z. 4027 Taiwan, ROC

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

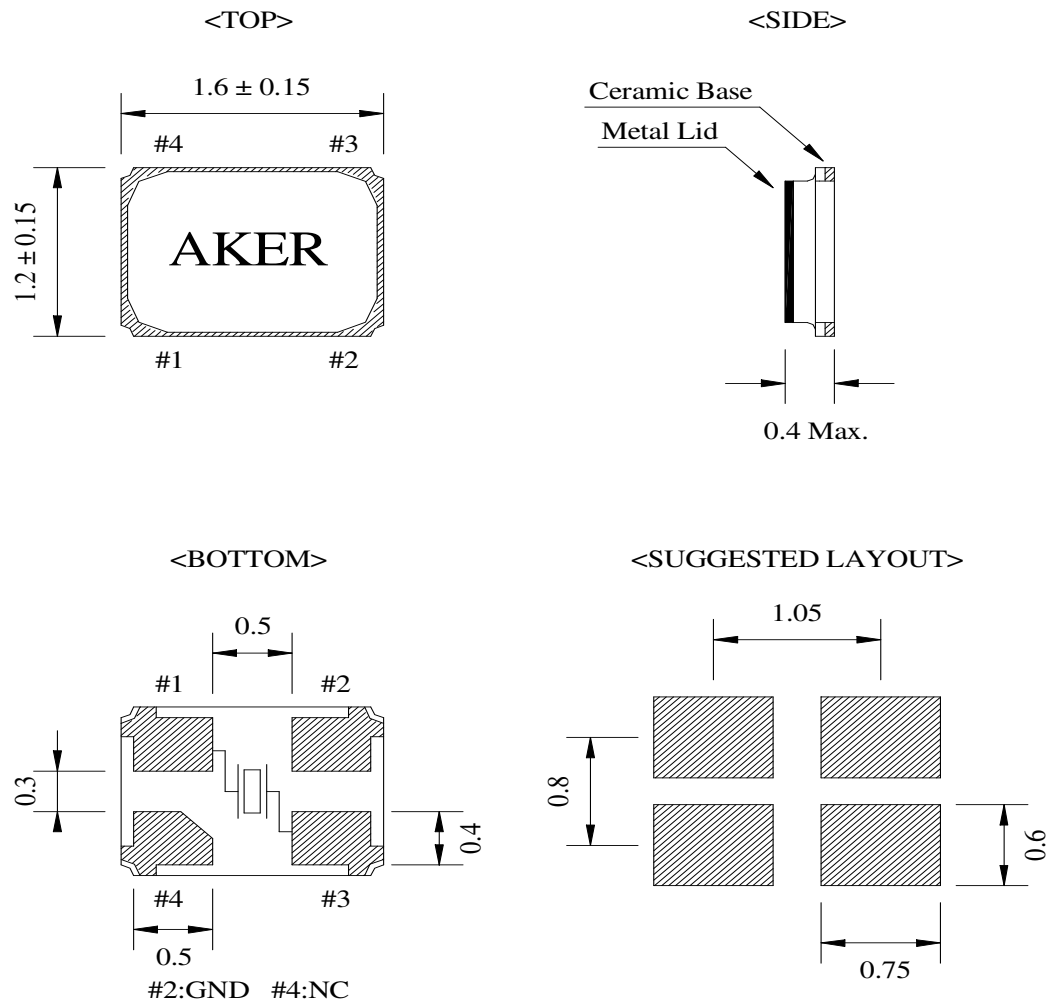
Page: 1/4 Date: Nov 25, 2018

Specification Title:

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

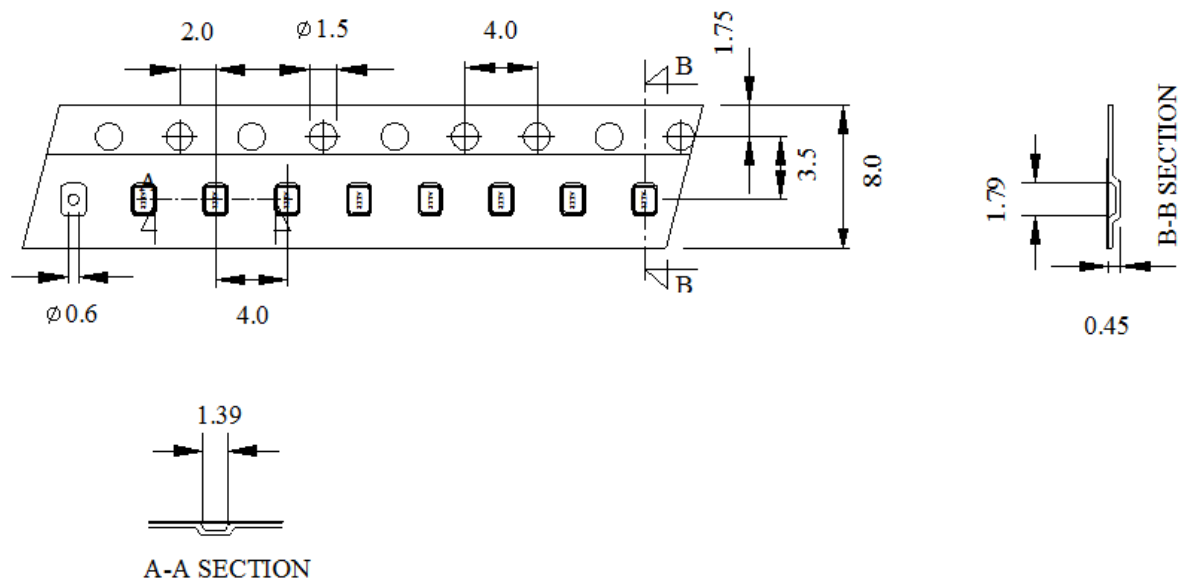
Part Number: **C16 Series**

**Mechanical Outline:**

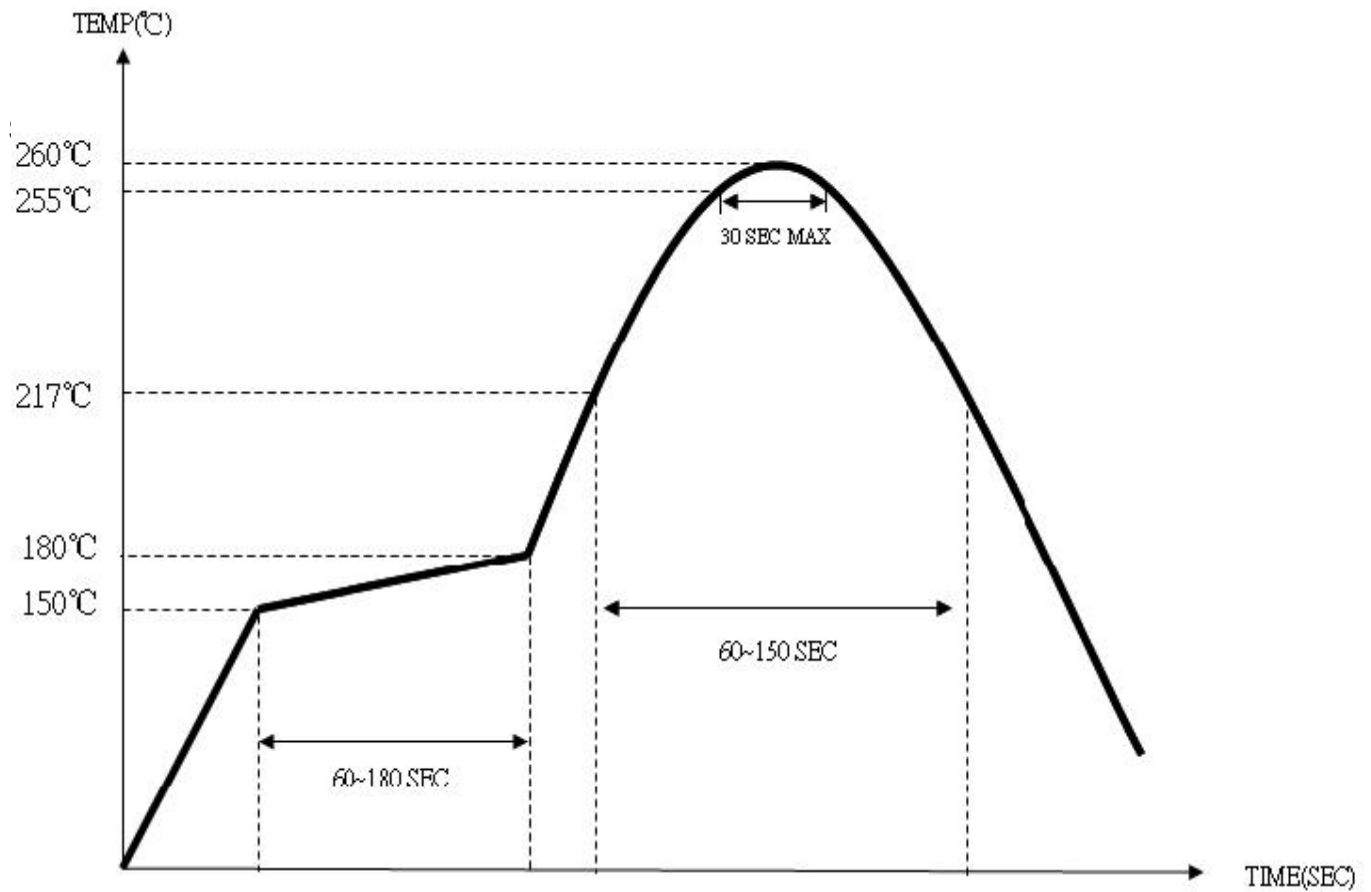


**Package is Seam Sealed Ceramic-Metal.**  
**Dimensions are millimeters.**

## Carrier Tape Dimensions:



Dimensions are millimeters.



### How to build a Part Number:

Series		C	Parameter
Package		16	1.6 x 1.2 mm Seam Seal
		-	
Frequency		24.000 to 48.000	MHz
		-	
Load Capacitance		6	6 pF
		10	10 pF
		12	12 pF
		16	16 pF
		18	18 pF
		20	20 pF
		32	32 pF
		-	
Frequency Tolerance (Note 1)	Standard	30	±30 PPM
	Option	25	±25 PPM
		20	±20 PPM
		15	± 15 PPM
		10	±10 PPM
Frequency Stability (Note 1)	Standard	50	±50 PPM
	Option	30	±30 PPM
		25	±25 PPM
		20	±20 PPM
		15	±15 PPM*
		-	
Temperature Range	Standard	See Notes	-20 to +70 °C
	Extended	X	-40 to +85 °C
		-	
Packaging		M	250pcs Reel
		R	1000pcs Reel
		R3	3000pcs Reel

### Part Number Example:

**C16-40.000-10-3030-X-R**

**C16- 1.6 x 2.0 mm SMD Seam Seal Crystal Unit**

**40.000 MHz Nominal Frequency**

**10 pF Load Capacitance**

**3030: ±30 PPM Frequency Tolerance and ±30 PPM Frequency Stability**

**-40 to +85° C Temperature Range**

**R: Tape and Reel Packaging - 1000pcs**

### 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 250pcs are shipped bulk in tape only

5- Specification subject to change without notice.