



No.11-3 Jianguo Rd., T.E.P.Z. 42760 Taiwan, ROC

All dimensions are millimeters.

CAD:	TCR	
Review:	EG	
Appr:	JL	
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Specification Title:

**Microprocessor Crystal Unit
Low Profile
1.6 x 1.2 millimeter Surface Mount - 4 Pad
General Product Specification**

Series Name: C16 Series

Electrical Specifications:

Frequency Range		24.000 to 60.000	MHz
Mode of Oscillation	Fundamental	24.000 to 60.000	MHz
Frequency Tolerance at 25°C	Standard	±30	PPM Max (Note 1)
	Optional	±50	
		±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max (Note 1)
	Optional	±100	
		±30	
		±25	
		±20	
Operating Temperature Range	Standard	-20 to +70	°C
	Extended	-40 to +85	
		-40 to +125	
Storage Temperature Range		-55 to +125	
Aging		±3	PPM Max/Year
Load Capacitance		6 to 47 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

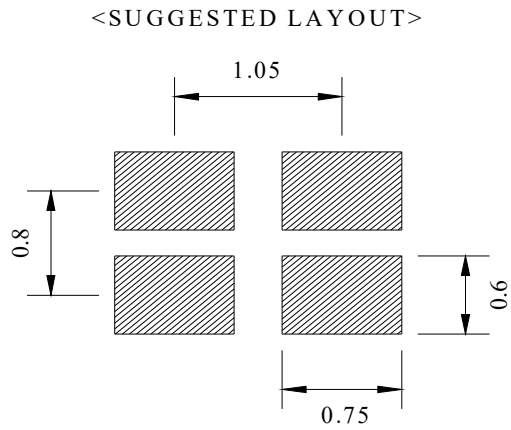
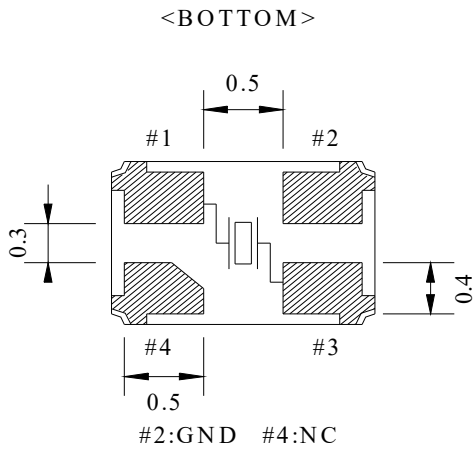
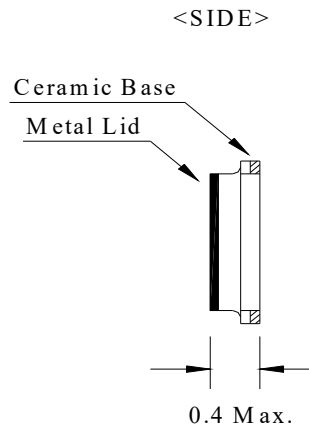
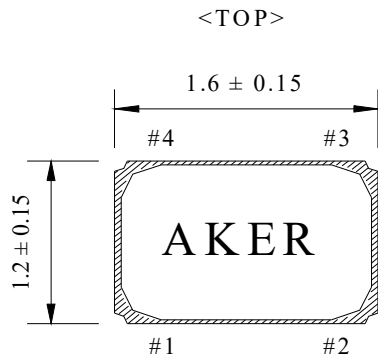
Frequency Range and ESR Values:

Frequency Range in MHz	ESR Ohm Max	Mode of Operation
24.000 to 29.999	150	Fundamental
30.000 to 31.999	100	Fundamental
32.000 to 39.999	80	Fundamental
40.000 to 60.000	60	Fundamental

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

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Mechanical Outline:

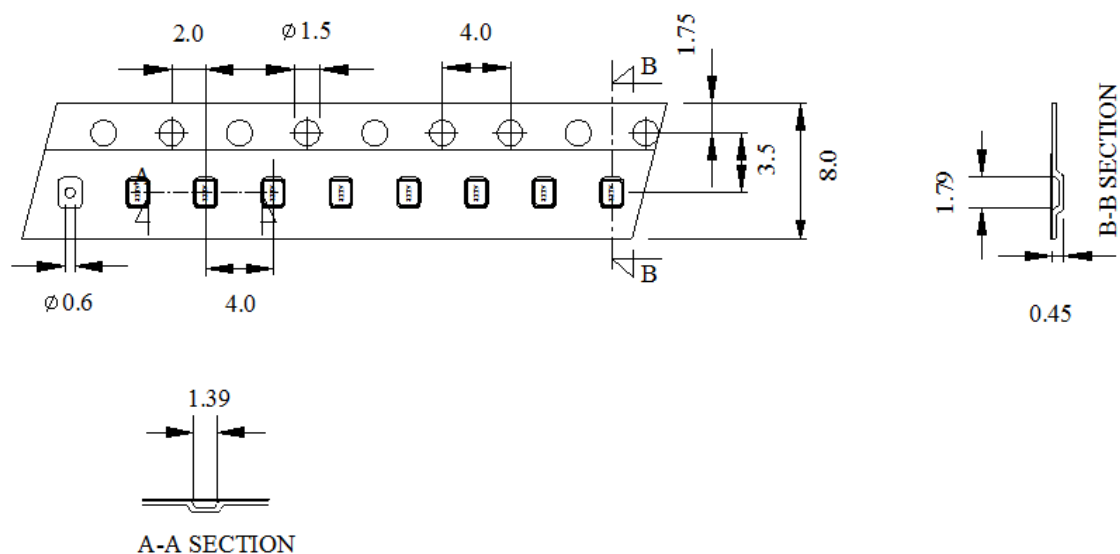


**Package is Seam Sealed Ceramic-Metal.
Dimensions are millimeters.**

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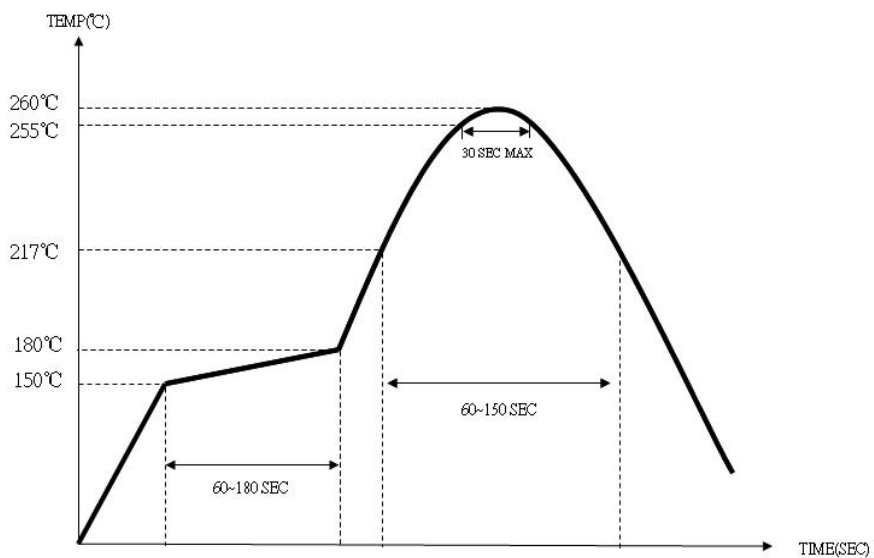
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Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



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How to build a Part Number:

Series		C	Parameter
Package		16	1.6 x 1.2 mm - 4 Pad
		-	
Frequency		24.000 to 60.000	MHz
		-	
Load Capacitance		6	6pF
		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	100	±100PPM
		30	±30PPM
		25	±25PPM
		20	±20PPM
		15	±15PPM
		-	
Temperature Range	Standard	See Notes	-20 to +70 °C
	Option	X	-40 to +85 °C
	Option	X1	-40 to +125 °C
	Option	X2	-40 to +105 °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 1.2 mm SMD Seam Seal Crystal Unit - 4 Pad

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.

*** ±10 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 250pcs are shipped in tape only.

5- Specification subject to change without notice.

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