



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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Date:	August 01, 2022

Specification Title:

**Microprocessor Crystal Unit
Low Profile
6.0 x 3.5 millimeter Surface Mount - 4 Pad
General Product Specification**

Series Name: C6SA Series

Electrical Specifications:

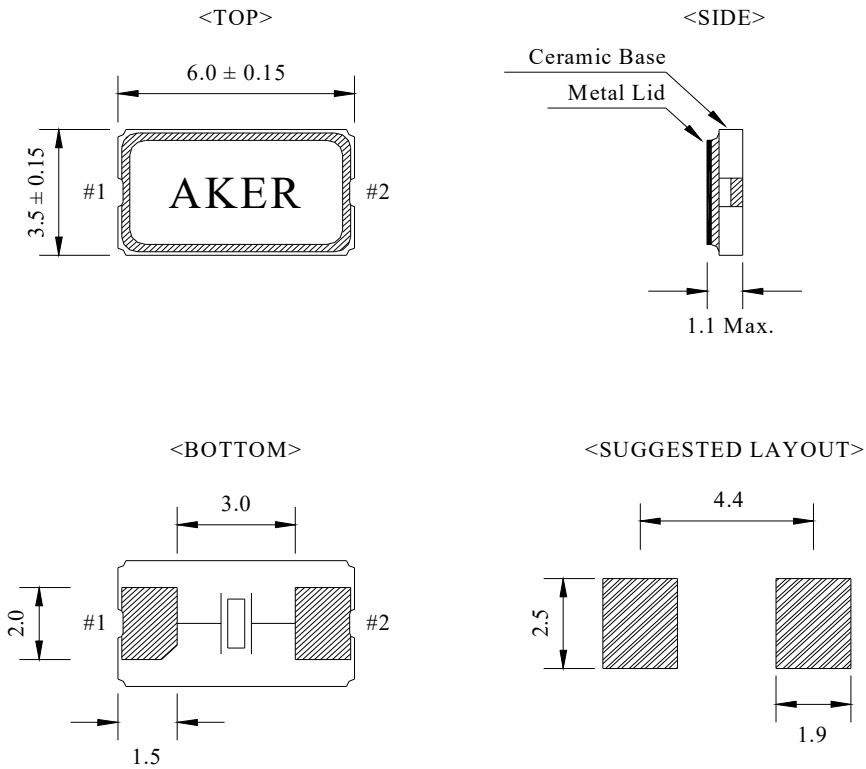
Frequency Range		8.000 to 133.000	MHz
Mode of Oscillation	Fundamental	8.000 to 52.000	MHz
	Third Overtone	40.000 to 133.00	
Frequency Tolerance at 25°C	Standard	±30	PPM Max
	Optional	±25	
		±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max
	Optional	±100	
		±30	
		±25	
		±20	
		±15	
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		7.0	
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	Frequency Range in MHz	ESR Ohm Max	Mode of Operation
8.000 to 8.999	60	Fundamental	40.000 to 51.999	90	Third Overtone
9.000 to 9.999	50	Fundamental	52.000 to 79.999	80	Third Overtone
10.000 to 11.999	45	Fundamental	80.000 to 133.000	70	Third Overtone
12.000 to 19.999	30	Fundamental			
20.000 to 24.999	25	Fundamental			
25.000 to 52.000	20	Fundamental			

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

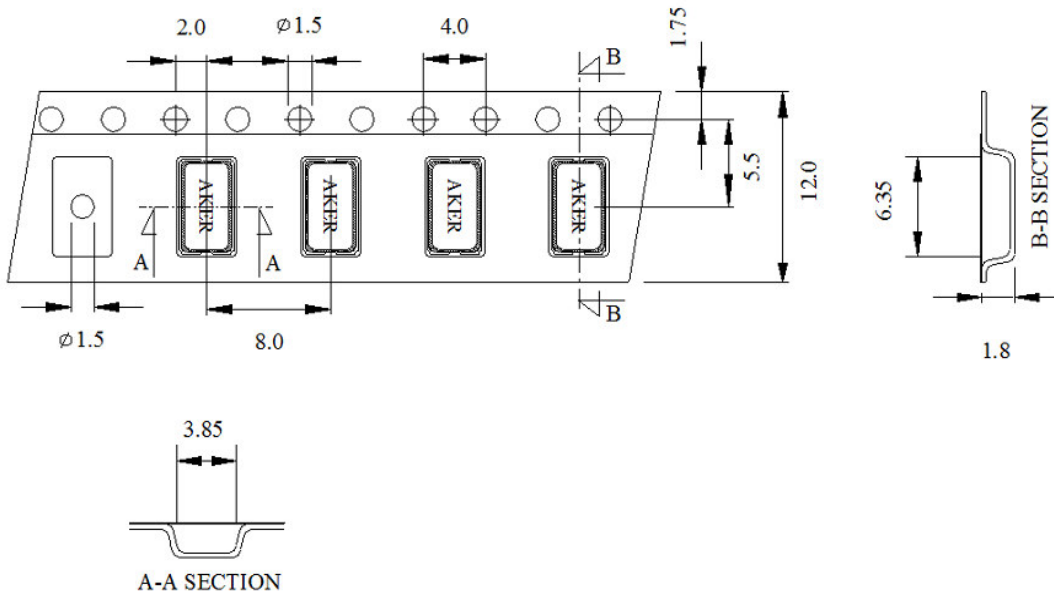
Mechanical Outline:



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

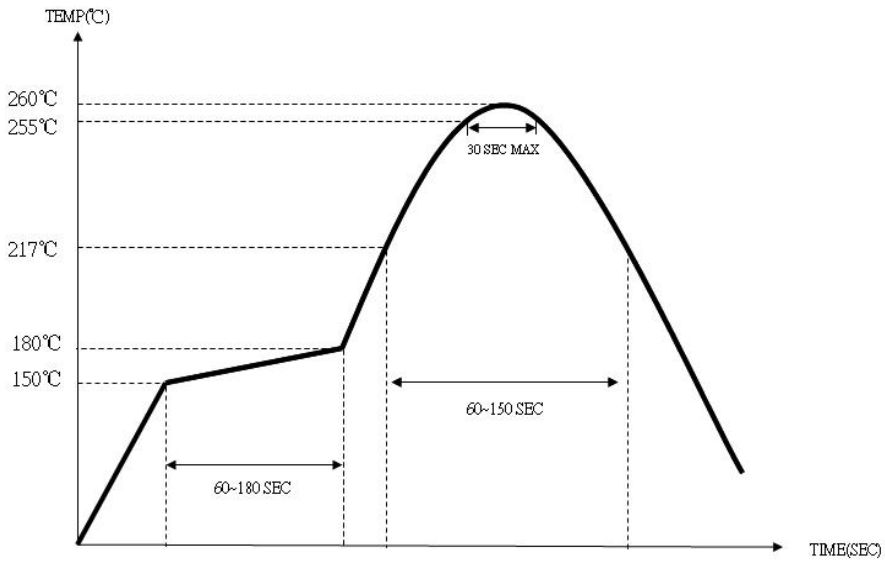
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Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series		C	Parameter
Package		6SA	6.0 x 3.5 mm - 2 Pad
		-	
Frequency		8.000 to 133.000	MHz
		-	
Load Capacitance		10	10 pF
		12	12 pF
		16	16 pF
		18	18 pF
		20	20 pF
		32	32 pF
		S	Series
		-	
Frequency Tolerance	Standard	30	±30PPM
	Option	25	±25PPM
		20	±20PPM
		15	±15PPM
		10	±10PPM
Frequency Stability	Standard	50	±50PPM
	Option	100	±100PPM
		30	±30PPM
		25	±25PPM
		20	±20PPM
		15	±15PPM
		10	±10PPM*
		-	
Mode of Oscillation		See Notes	Fundamental
		3	Third Overtone
		-	
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

Part Number Example:

C6SA-24.576.000-18-3050-R

C6SA: 6.0 x 3.5 mm Seam Seal Crystal Unit - 2 Pad

24.576 MHz Nominal Frequency

18 pF Load Capacitance

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

-10 to +70°C Temperature Range

R: Tape and Reel Packaging

Notes:

1- Fundamental mode does not need to be included in Part Number description.

*** ±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- Quantities less than 250pcs are shipped bulk in tape only.

4- Specification subject to change without notice.

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Date: August 01, 2022

P/N:

C6SA Series