



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
Automotive Grade
7.0 x 5.0 millimeter Surface Mount - 4 Pad
General Product Specification**

Series Name: C7S Auto Series

Electrical Specifications:

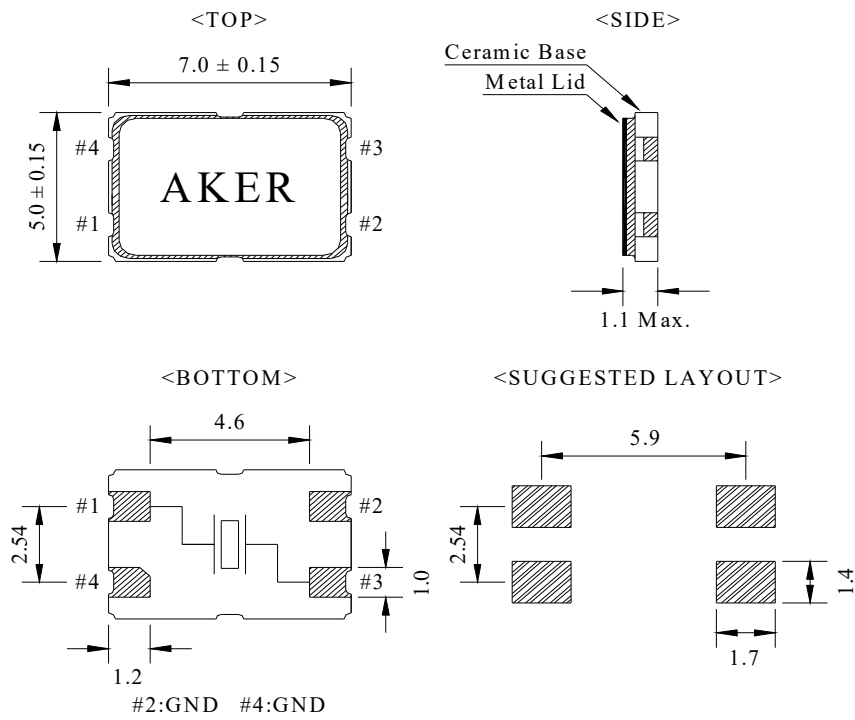
Frequency Range		6.000 to 133.000	MHz
Mode of Oscillation	Fundamental	6.000 to 50.000	MHz
	Third Overtone	40.000 to 133.00	
Frequency Tolerance at 25°C	Standard	±30	PPM Max
		±50	
	Optional	±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max
		±100	
	Optional	±30	
		±25	
		±20	
Operating Temperature Range	Standard	-40 to +85	°C
	Extended	-40 to +125	
Storage Temperature Range		-55 to +150	
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
6.000 to 7.999	70	Fundamental	40.000 to 50.000	20	Fundamental
8.000 to 9.999	40	Fundamental	40.000 to 51.999	70	Third Overtone
10.000 to 11.999	35	Fundamental	52.000 to 79.999	65	Third Overtone
12.000 to 19.999	30	Fundamental	80.000 to 133.000	60	Third Overtone
20.000 to 39.999	25	Fundamental			

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

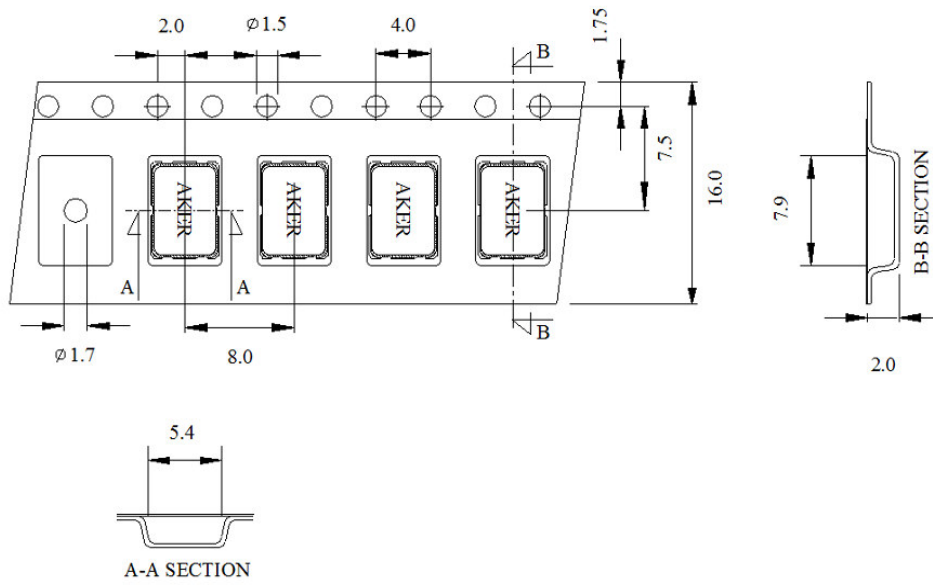
Mechanical Outline:



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

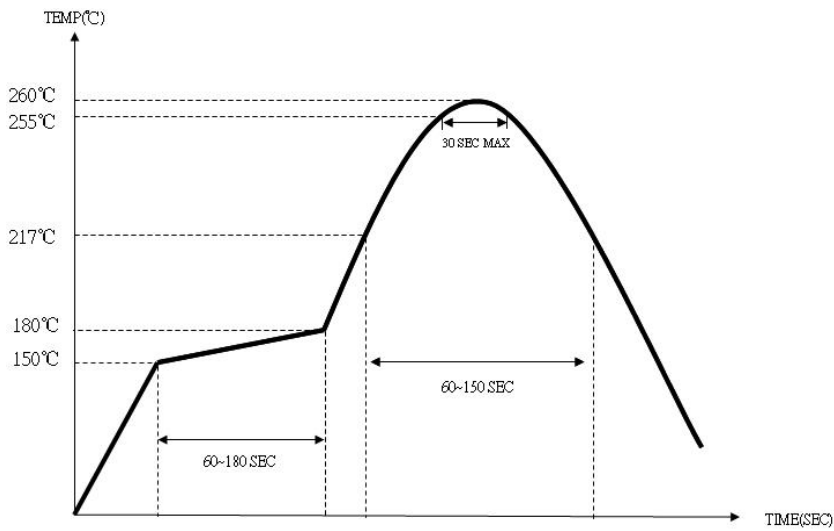
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Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	C	Parameter	
Package	7S	7.0 x 5.0 mm - 4 Pad	
	-		
Frequency	6.000 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	50	±50PPM
		20	±20PPM
		15	±15PPM
		10	±10PPM
Frequency Stability	Standard	50	±50PPM
	Option	100	±100PPM
		30	±30PPM
		25	±25PPM
		20	±20PPM
	-		
Mode of Oscillation	See Notes	Fundamental	
	3	Third Overtone	
	-		
AECQ-200	A	Automotive	
	-		
Temperature Range	Standard	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:

C7S-64.000-18-3050-3-A-X-R

C7S- 7.0 x 5.0 mm SMD Seam Seal Package - 4 pad

64.000 MHz Nominal Frequency

18 pF Load Capacitance

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

A: Automotive Grade

Third Overtone Mode

-40 to +85° C Temperature Range

R: Tape and Reel Packaging - 1000pcs Reel

Notes:

- 1- Fundamental mode does not need to be included in Part Number description.
- 2- Other Load Capacitances are available other than those listed in Part Number table above.
- 3- Product is shipped in Tape and Reel configuration.
- 4- Quantities less than 250pcs are shipped in tape
- 5- Specification subject to change without notice

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