

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

**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
		±25	
	Optional	±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max
		±30	
	Optional	±25	
		±20	
		±15	
Operating Temperature Range	Standard	-10 to +70	°C
	Extended	-40 to +85	
Storage Temperature Range		-55 to +125	
Aging		±3	PPM Max/Year
Load Capacitance		10 to 32 and Series Resonance	pF
Shunt Capacitance		7.0	
Equivalent Series Resistance(ESR)		See ESR Table	Ohm
Drive Level		100	uW Typ
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 79.999	70	Third Overtone
8.000 to 9.999	40	Fundamental	80.000 to 133.000	60	Third Overtone
10.000 to 14.999	35	Fundamental			
15.000 to 39.999	30	Fundamental			
40.000 to 50.000	20	Fundamental			



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

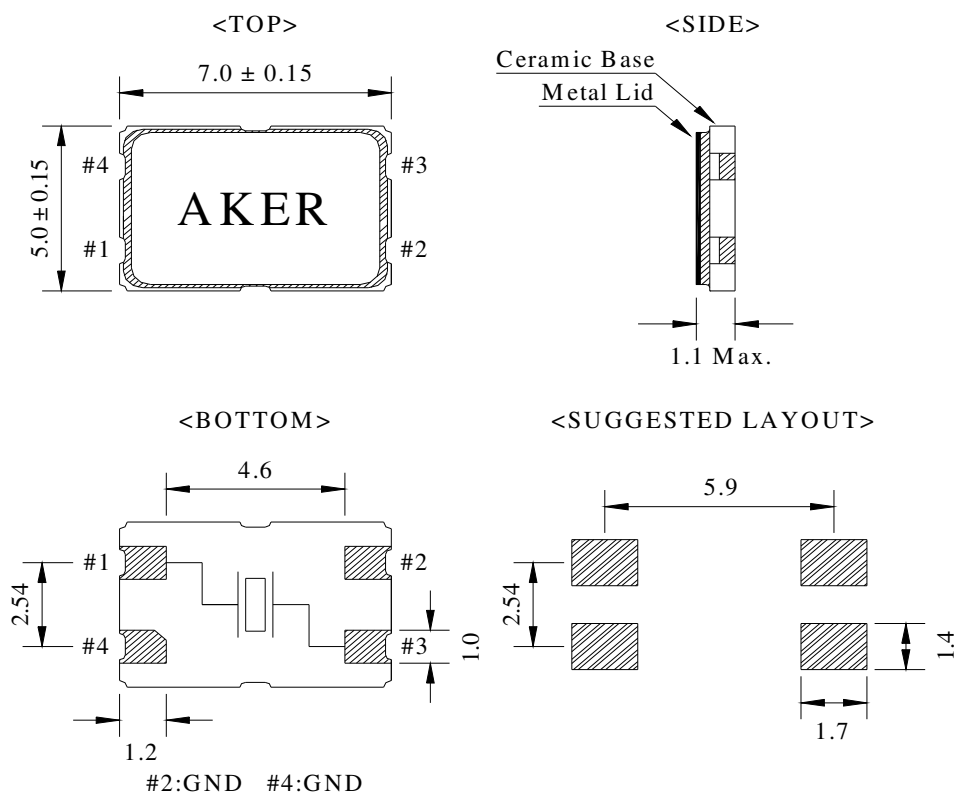
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**Specification Title:**

**Microprocessor Crystal Unit  
Low Profile  
5 x 7 millimeter Surface Mount - 4 Pad  
General Product Specification**

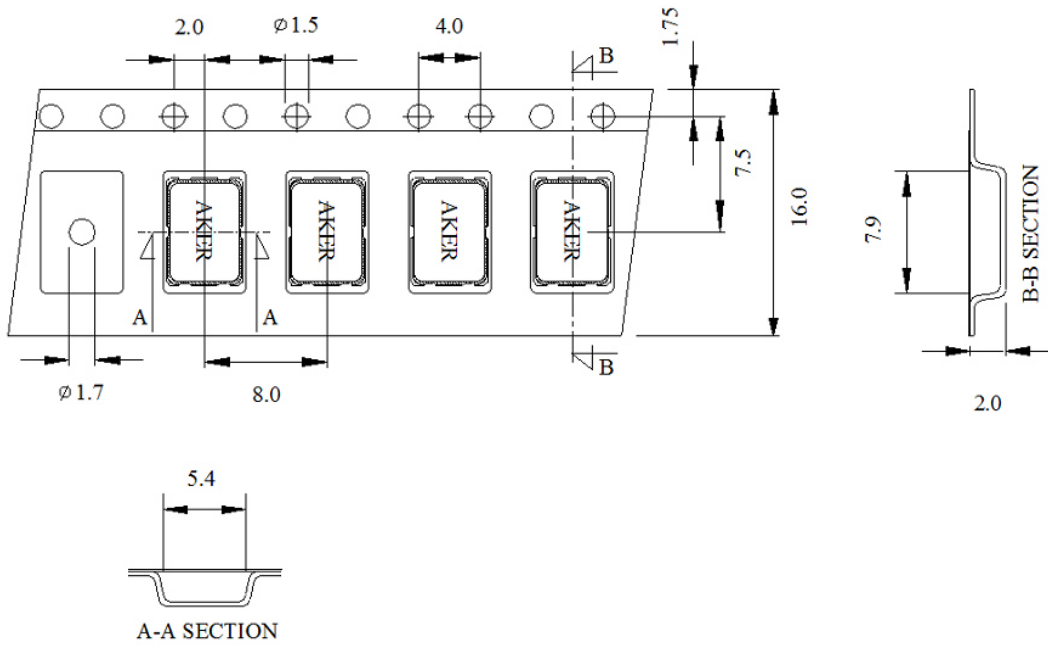
**Part Number: C7S Series**

**Mechanical Outline:**



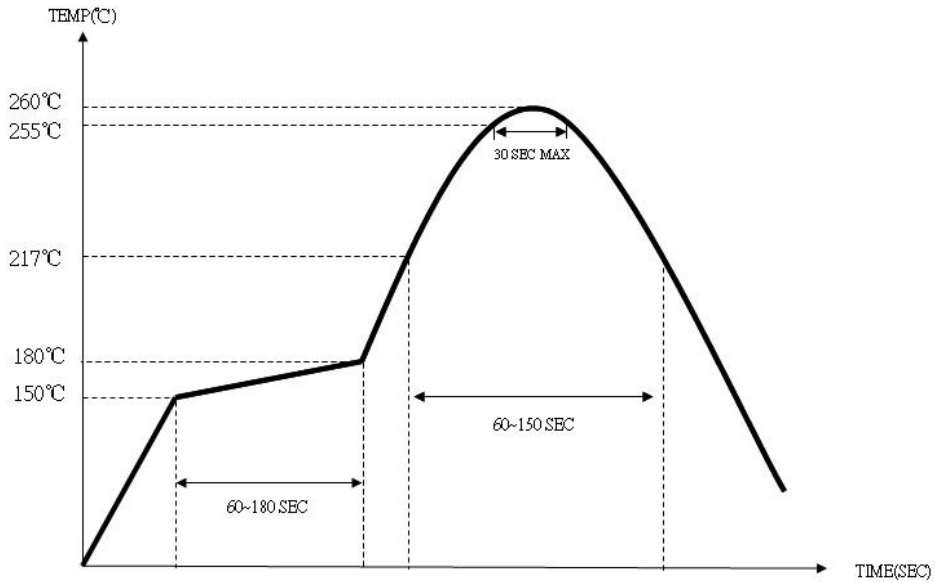
**Package is Seam Sealed Ceramic-Metal.  
Dimensions are millimeters.**

**Carrier Tape Dimensions:**



**Dimensions are millimeters.**

**Solder Reflow Characteristics:**



**How to build a Part Number:**

<b>Series</b>		<b>C</b>	<b>Parameter</b>		
<b>Package</b>		<b>7S</b>	<b>5.0 x 7.0 mm</b>		
-					
<b>Frequency</b>		<b>6.000 to 133.000</b>	<b>MHz</b>		
-					
<b>Load Capacitance</b>		<b>10</b>	<b>10 pF</b>		
		<b>12</b>	<b>12 pF</b>		
		<b>16</b>	<b>16 pF</b>		
		<b>18</b>	<b>18 pF</b>		
		<b>20</b>	<b>20 pF</b>		
		<b>32</b>	<b>32 pF</b>		
		<b>S</b>	<b>Series</b>		
-					
<b>Frequency Tolerance</b>		<b>Standard</b>	<b>30</b>	<b>±30PPM</b>	
		<b>Option</b>		<b>25</b>	<b>±25PPM</b>
				<b>20</b>	<b>±20PPM</b>
				<b>15</b>	<b>±15PPM</b>
				<b>10</b>	<b>±10PPM</b>
<b>Frequency Stability</b>		<b>Standard</b>	<b>50</b>	<b>±50PPM</b>	
		<b>Option</b>		<b>30</b>	<b>±30PPM</b>
				<b>25</b>	<b>±25PPM</b>
				<b>20</b>	<b>±20PPM</b>
				<b>15</b>	<b>±15PPM</b>
				<b>10</b>	<b>±10PPM*</b>
-					
<b>Mode of Oscillation</b>		<b>See Notes</b>	<b>Fundamental</b>		
		<b>3</b>	<b>Third Overtone</b>		
-					
<b>Temperature Range</b>		<b>Standard</b>	<b>See Notes</b>	<b>-10 to +70 °C</b>	
		<b>Option</b>	<b>X</b>	<b>-40 to +85 °C</b>	
-					
<b>Packaging</b>		<b>R</b>	<b>Tape and Reel</b>		

**Part Number Example:**

**C7S-64.000-18-3050-3-R C7S- 5 x 7 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 Third Overtone Mode  
 -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- Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
- 4- Quantities less than 1000 are shipped bulk in ESD pouches.
- 5- Specification subject to change without notice.

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