



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

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

Page: 1/4 Date: August 01, 2022

**Specification Title:**

**Microprocessor Crystal Unit  
Low Profile  
7.0 x 5.0 millimeter Surface Mount - 4 Pad  
General Product Specification**

**Series Name: C7S 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
	Optional	±25	
		±20	
		±15	
		±10	
Frequency Stability over Temperature Range	Standard	±50	PPM Max
	Optional	±100	
		±30	
		±25	
		±20	
		±15	
±10*			
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

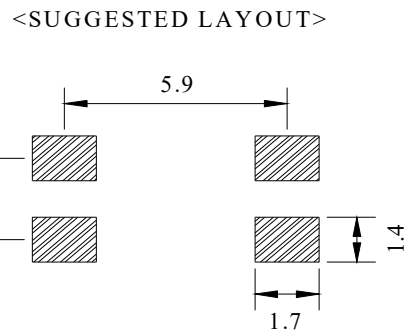
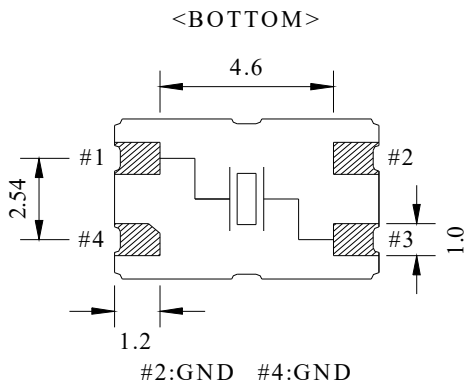
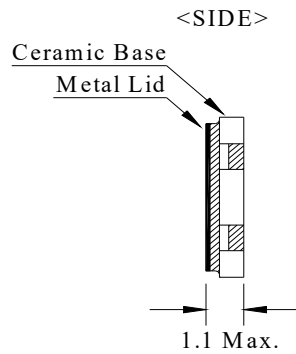
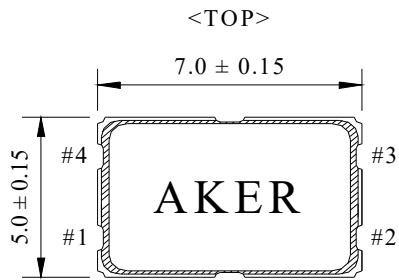
**Frequency Range and ESR Values:**

Frequency Range in MHz	ESR Ohm Max	Mode of Operation	Frequency Range in MHz	ESR Ohm Max	Mode of Operation
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**

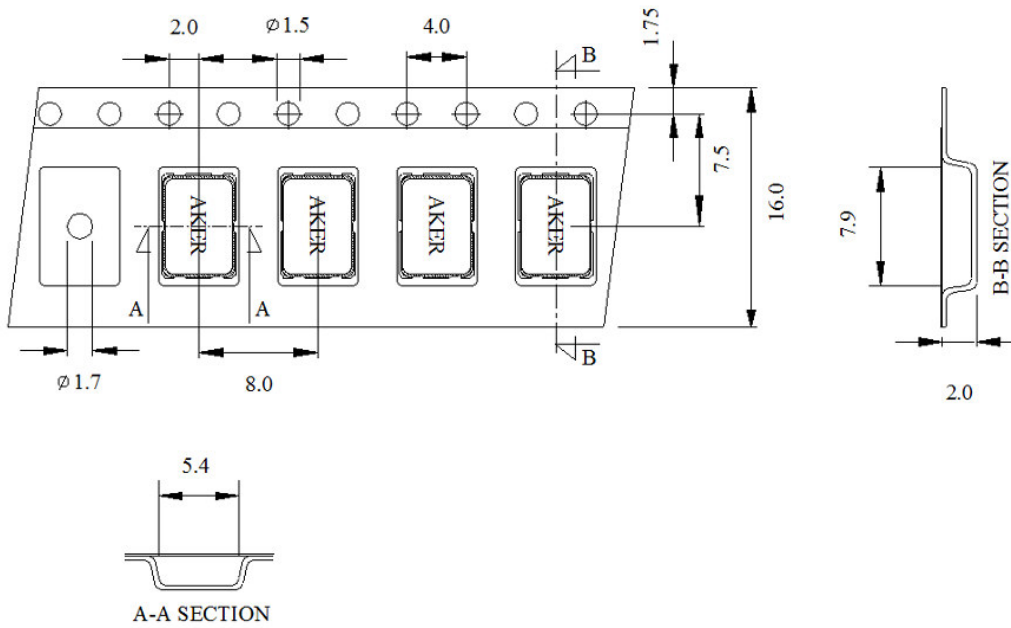
Ltr	Revisions	Date	Appr

**Mechanical Outline:**



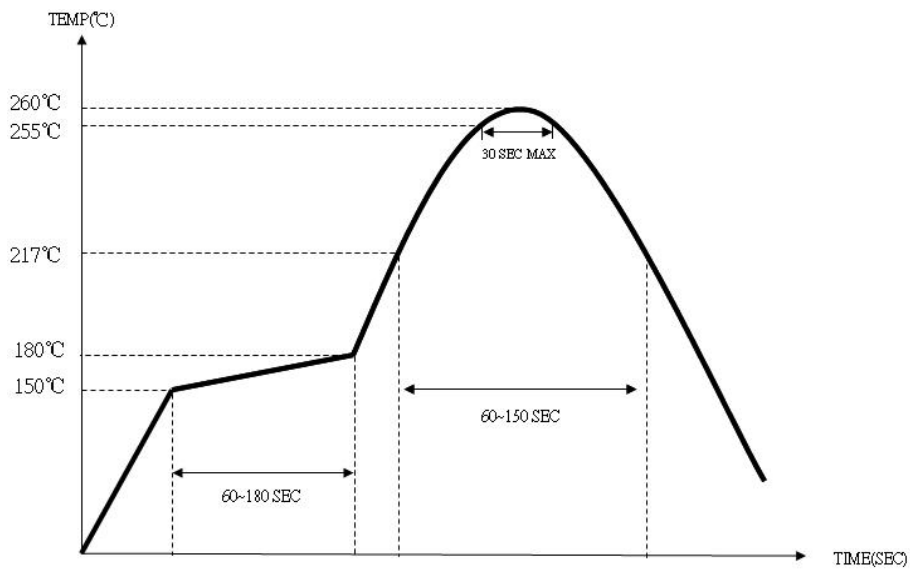
**Package is Seam Sealed Ceramic-Metal.  
Dimensions are millimeters.**

**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>7.0 x 5.0 mm - 4 Pad</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>100</b>	<b>±100PPM</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>-20 to +70 °C</b>
	<b>Option</b>	<b>X</b>	<b>-40 to +85 °C</b>
	<b>Option</b>	<b>X1</b>	<b>-40 to +125 °C</b>
	<b>Option</b>	<b>X2</b>	<b>-40 to +105 °C</b>
		-	
<b>Packaging</b>		<b>M</b>	<b>250pcs Reel</b>
		<b>R</b>	<b>1000pcs Reel</b>

**Part Number Example:**

**C7S-64.000-18-3050-3-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**

**Third Overtone Mode**

**-10 to +70° C Temperature Range**

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

**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.**

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