



Accurate Kinetic Energy

No.11-3 Jianguo Rd., Tanzi Dist., 42760 Taiwan

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

Page: 1/4 Date: April 16,2024

Specification Title:

Clock Oscillator Automotive Grade
HCSL - Complimentary Output
7.0 x 5.0 millimeter Surface Mount
General Product Specification

AEC-Q200 Qualified
IATF 16949 Certified

Part Number:

S7A Auto HCSL Series

Electrical Specifications:

Table with 6 columns and 20 rows detailing electrical specifications such as Frequency Range (13.500 ~ 160.000 MHz), Frequency Stability (±25 ~ ±100 ppm), Aging per Year (±3 ppm Max.), Operating Temperature Range (-20 ~ +70 °C), Storage Temperature Range (-55 ~ +125 °C), Supply Voltage (1.8 ± 5%, 2.5 ± 5%, 3.3 ± 5%, 2.375~3.63 VDD), Input Current (30 mA Max.), Output Voltage (Logic High (Voh) 0.85, Logic Low (Vol) -0.15), Output Symmetry (Duty Cycle) (45 ~ 55 %), Output Type (HCSL), Output Load (Terminated to GND) (50 ohm), Rise and Fall Time (1.0 ns Max. for 13.500 to 99.999MHz, 0.7 ns Max. for 100.000 to 160.000MHz), Enable-Disable Function (Tri-State), Input Enable Voltage (1.26, 1.75, 2.31, 70%VDD), Input Disable Voltage (0.54, 0.75, 0.99, 30%VDD), and Phase Jitter (12 KHz to 20 MHz) (0.5 ps Max. RMS).

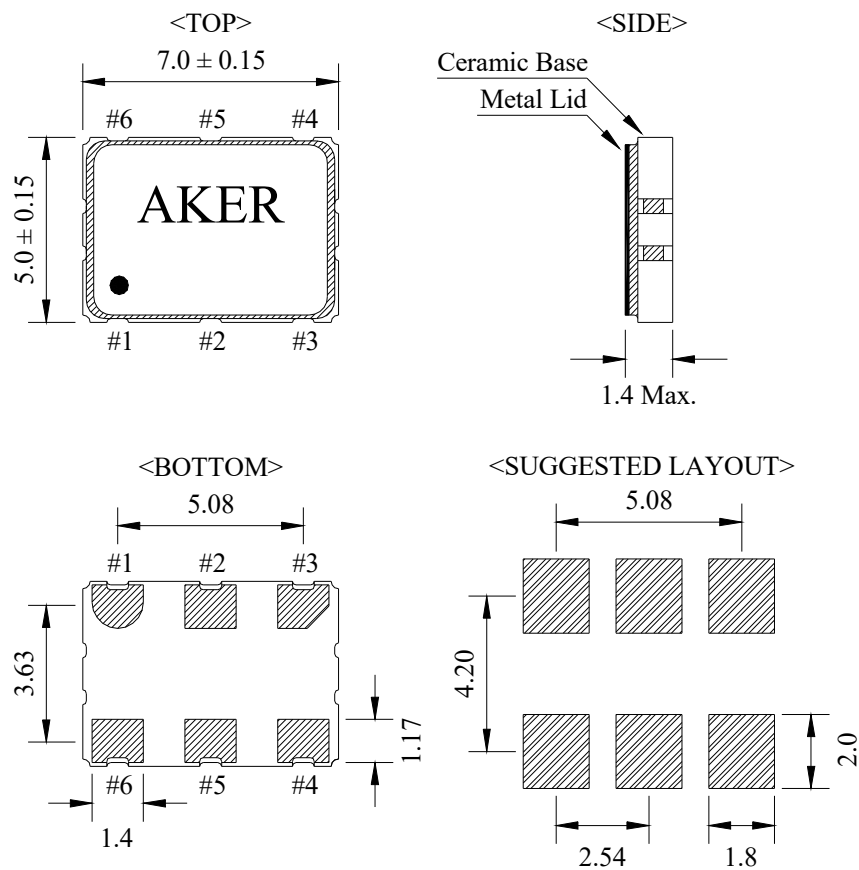
Temperature stability is Inclusive of all conditions:

Calibration Tolerance at +25°C, frequency stability over the operating temperature range, supply voltage change, output load change, shock, vibration, and 1st year aging at +25°C.

RoHS Compliant
Pb - Lead Free
AEC-Q200 Qualified
IATF 16949 Certified

Table with 4 columns: Ltr, Revisions, Date, Appr. It contains a grid for tracking revisions and approvals.

## Mechanical Outline and Solder Pad Layout:



Pin Connection	
PIN No.	Connection
#1	Enable/Disable
#2	NC
#3	GND
#4	Output - Q
#5	Output - QN
#6	VDD

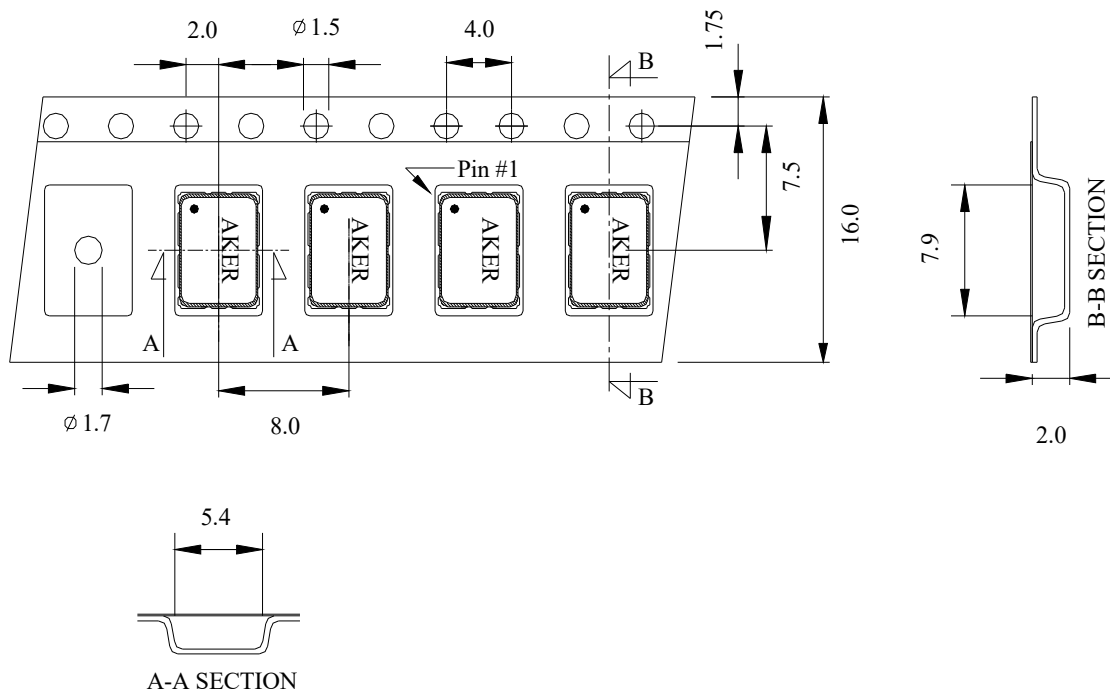
Enable/Disable Function	
PIN #1	PIN #4 & #5
HIGH or OPEN	Operating
LOW	High Impedance

**Package is Seam Sealed Ceramic-Metal.**

**Terminator Pads are Ni/Au.**

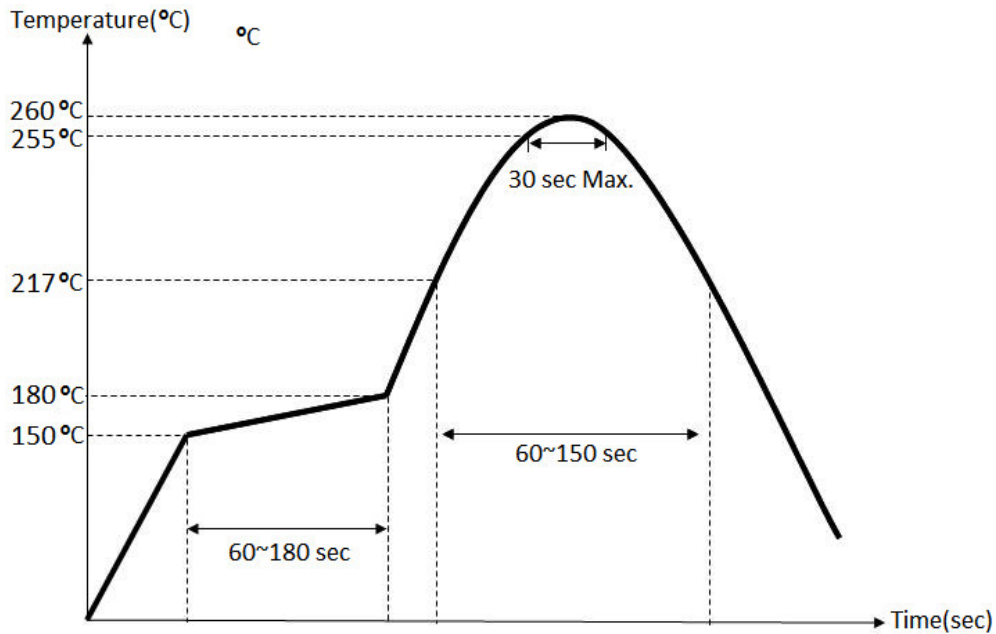
**Dimensions are millimeters.**

### Carrier Tape Dimensions:



Dimensions are millimeters.

### Solder Reflow Characteristics:



### How to build a Part Number:

Series	S	Parameter
Package	7A	7.0 x 5.0 mm - 6 Pad
Supply Voltage	33	+3.3 VDD ± 5%
	25	+2.5 VDD ± 5%
	18	+1.8 VDD ± 5%
	M	+2.375 ~ +3.63 VDD
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
Frequency	13.500~160.000	MHz
Output Load	H	HCSL
AECQ-200	A	Automotive
Temperature Range	See Notes	-20 ~ +70 °C
	X	-40 ~ +85 °C
	X1	-40 ~ +125 °C
	X2	-40 ~ +105 °C
Packaging	M	250pcs Reel
	R	1000pcs Reel

### Part Number Example:

S7A3305-156.250-H-A-X-R

S7A: 5.0 x 7.0 mm SMD Package - 6 Pad

33: +3.3±5% VDD Supply Voltage

05: ±50 ppm Temperature Stability

156.250 MHz Nominal Frequency

H: HCSL Output

A: Automotive Grade

X: -40 ~ + 85°C Extended Temperature Range

R: Tape and Reel Packaging - 1000pcs Reel

### Notes:

- 1- Standard Duty Cycle and Temperature Range do not need to be included in Part Number description.
- 2- Product is shipped in Tape and Reel configuration.
- 3- Quantities less than 250pcs are shipped in tape only.
- 4- Specification subject to change without notice.