



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: August 01,2022

Specification Title:

**Clock Oscillator  
LVDS - Complimentary Output  
7.0 x 5.0 millimeter Surface Mount  
General Product Specification**

Part Number:

**S7A LVDS Series**

**Electrical Specifications:**

Frequency Range		13.500 ~ 800.000			MHz
Frequency Stability		±25 ~ ±100			ppm
Aging per Year		±3			ppm Max.
Operating Temperature Range	Standard	-20 ~ +70			°C
	Extended	-40 ~ +85			
Storage Temperature Range		-55 ~ +125			
Supply Voltage		1.8 ± 5%	2.5 ± 5%	3.3 ± 5%	VDD
Input Current	13.500 to 99.999MHz	50	50	50	mA Max.
	100.000 to 160.000MHz	50	50	50	
	160.001 to 800.000MHz		50	50	
Output Voltage	Logic High (Voh)	1.60	1.60	1.60	VDD Max.
	Logic Low (Vol)	0.90	0.90	0.90	VDD Min.
Differential Output Voltage ( V <sub>od</sub> )		247 ~ 454			mV
Offset Voltage ( V <sub>os</sub> )		1.125 ~ 1.375			V
Output Symmetry (Duty Cycle)		45 ~ 55			%
Output Type		LVDS			
Output Load ( Between Q and QN )		100			ohm
Rise and Fall Time	13.500 to 99.999MHz	1.0	1.0	1.0	ns Max.
	100.000 to 160.000MHz	0.5	0.5	0.5	
	160.001 to 800.000MHz		0.5	0.5	
Enable-Disable Function		Tri-State			
Input Enable Voltage		1.26	1.75	2.31	VDD Min.
Input Disable Voltage		0.54	0.75	0.99	VDD Max.
Phase Jitter (12 KHz to 20 MHz)	13.500 to 99.999MHz	1			ps Max. RMS
	100.000 to 160.000MHz	1			
	160.001 to 800.000MHz	2			

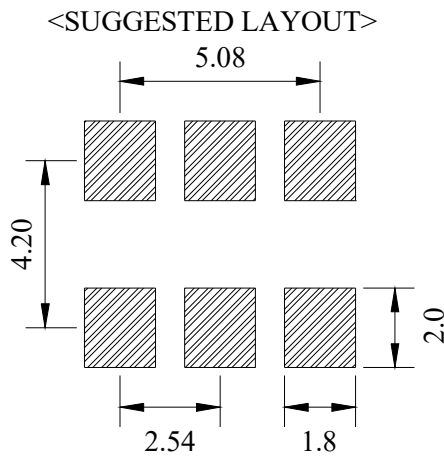
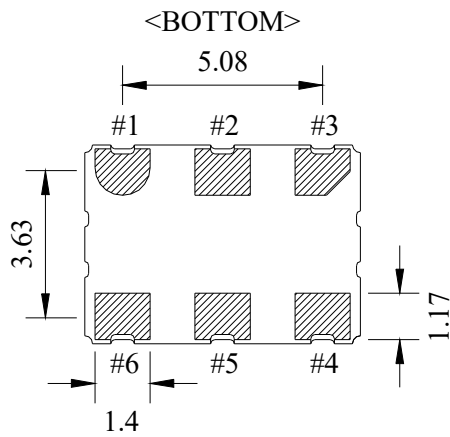
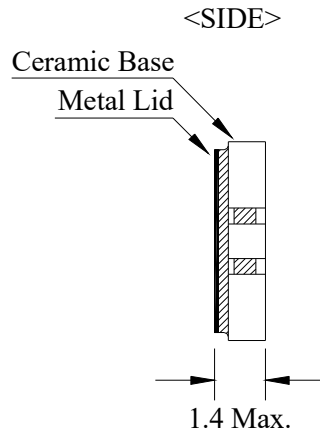
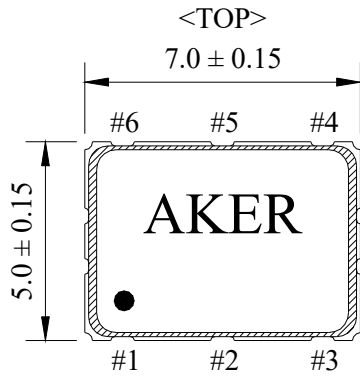
Temperature stability is Inclusive of all conditions:

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

**RoHS Compliant  
Pb - Lead Free**

Ltr	Revisions	Date	Appr

## 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

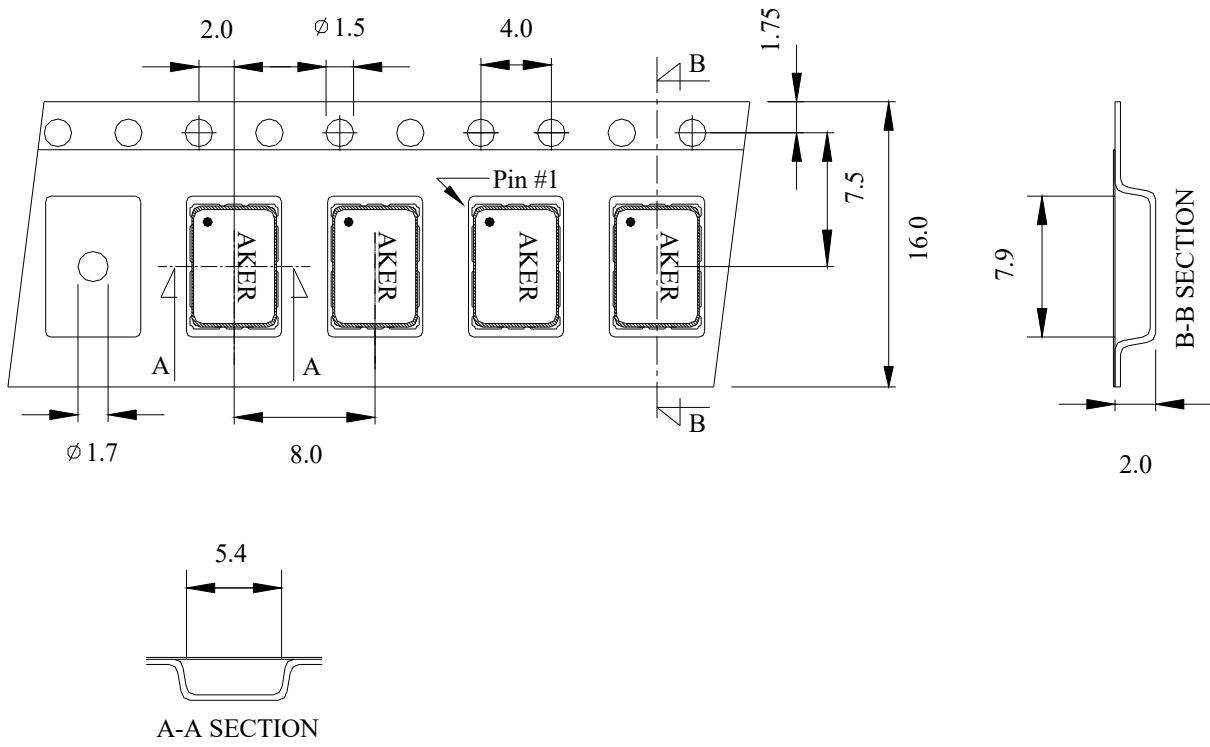
Enable/Disable Function	
PIN #1	PIN #4 & #5
HIGH or OPEN	Operating
LOW	High Impedance

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

**Terminator Pads are Ni/Au.**

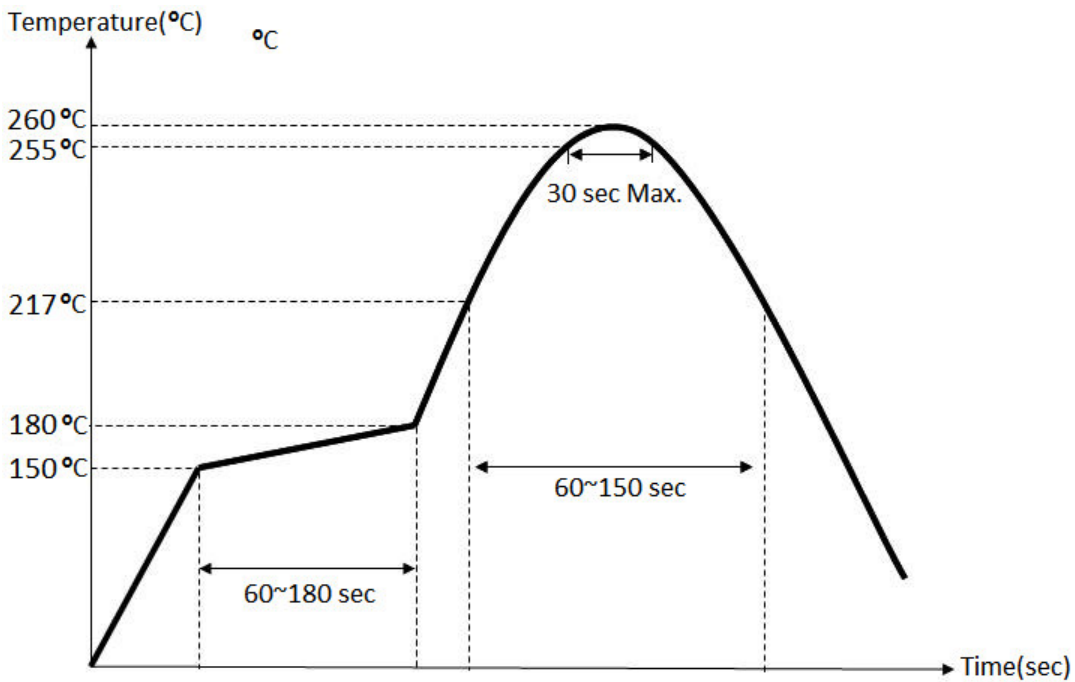
**Dimensions are millimeters.**

### 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%
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
	-	
Frequency	13.500~800.000	MHz
	-	
Output Load	L	LVDS
	-	
Temperature Range	See Notes	-20 ~ +70 °C
	X	-40 ~ +85 °C
	-	
Packaging	M	250pcs Reel
	R	1000pcs Reel

### Part Number Example:

S7A3305-156.250-L-X-R

S7A: 7.0 x 5.0 mm SMD Package - 6 Pad

33: +3.3±5% VDD Supply Voltage

05: ±50 ppm Temperature Stability

156.250 MHz Nominal Frequency

L: LVDS Output

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.