



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 22,2024

Specification Title:

Clock Oscillator Automotive Grade
LVPECL - Complimentary Output
2.5 x 2.0 millimeter Surface Mount
General Product Specification

AEC-Q200 Qualified
IATF 16949 Certified

Part Number: **S2A Auto LVPECL Series**

Electrical Specifications:

Frequency Range		13.500 ~ 200.000		MHz
Frequency Stability		±25 ~ ±100		ppm
Aging per Year		±3		ppm Max.
Operating Temperature Range	Standard	-20 ~ +70		°C
	Option	-40 ~ +85		
	Option	-40 ~ +105		
	Option	-40 ~ +125		
Storage Temperature Range		-55 ~ +125		
Supply Voltage		2.5 ± 5%	3.3 ± 5%	VDD
Input Current		50	50	mA Max.
Output Voltage	Logic High (Voh)	1.475	2.275	VDD Min.
	Logic Low (Vol)	1.095	1.680	VDD Max.
Output Symmetry (Duty Cycle)		45 ~ 55		%
Output Type		LVPECL		
Output Load (Connect to VDD - 2V)		50		ohm
Rise and Fall Time	13.500 to 99.999MHz	1.0	1.0	ns Max.
	100.000 to 200.000MHz	0.5	0.5	
Enable-Disable Function		Tri-State		
Input Enable Voltage		1.75	2.31	VDD Min.
Input Disable Voltage		0.75	0.99	VDD Max.
Phase Jitter (12 KHz to 20 MHz)		0.5		ps Max. RMS

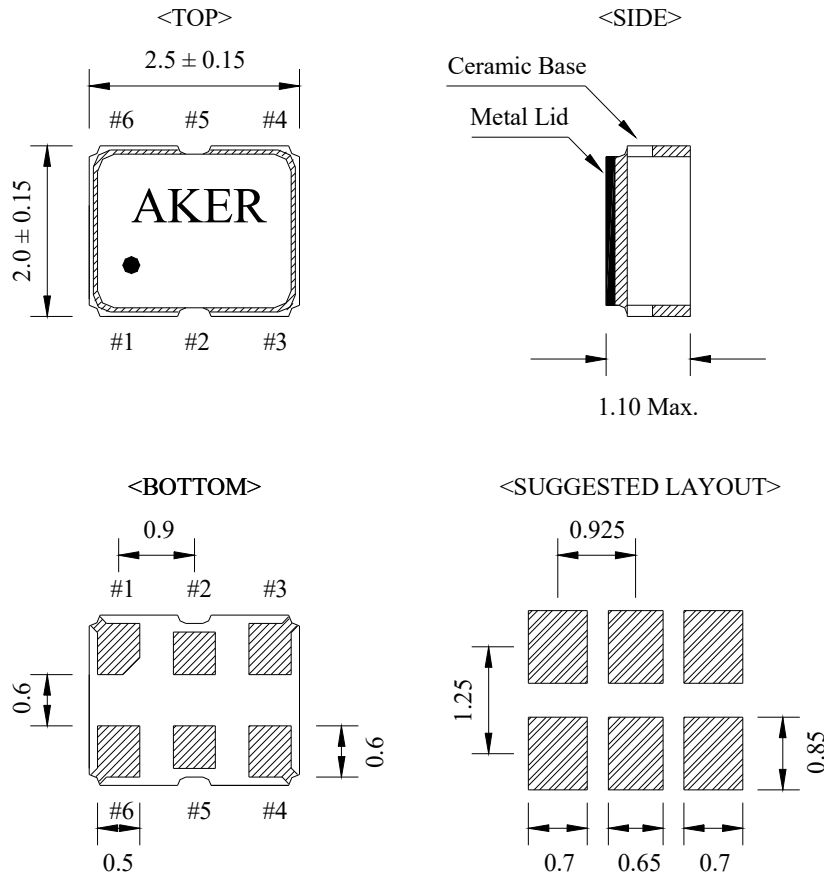
Temperature stability is Inclusive of all conditions:

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

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

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

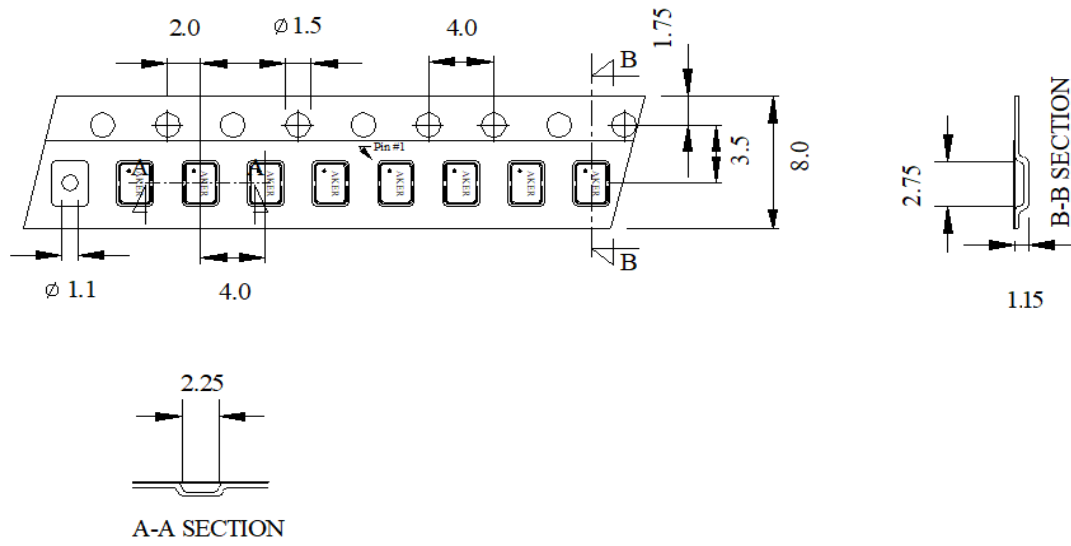
Enable/Disable Function	
PIN #1	PIN #4 & #5
HIGH or OPEN	Operating
LOW	High Impedance

Package is Seam Sealed Ceramic-Metal.

Terminator Pads are Ni/Au.

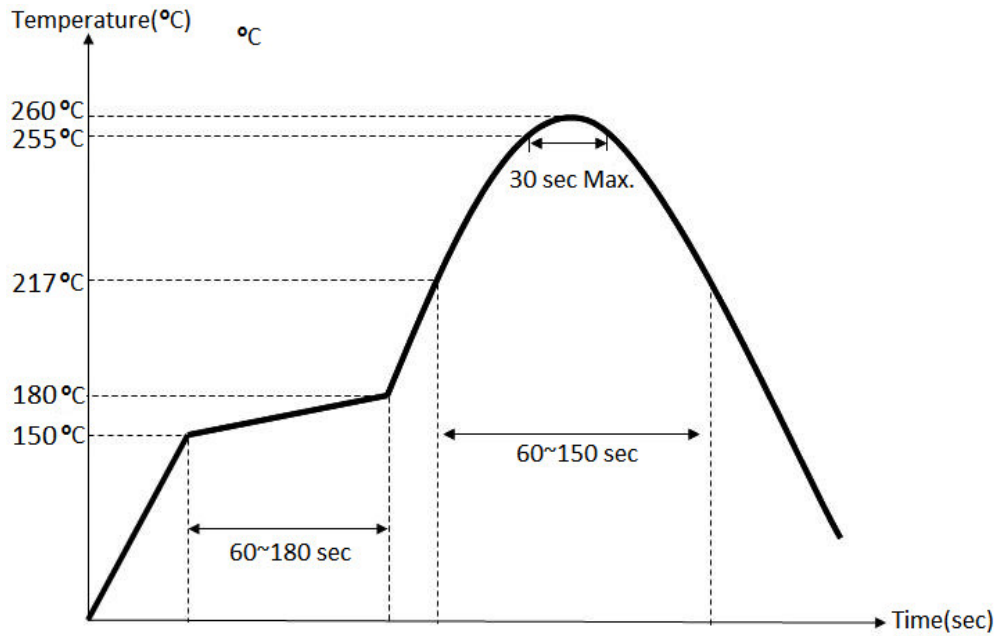
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	2A	2.5 x 2.0 mm - 6 Pad
Supply Voltage	33	+3.3 VDD ± 5%
	25	+2.5 VDD ± 5%
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
Frequency	13.500~200.000	MHz
Output Load	P	LVPECL
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:

S2A3305-156.250-P-X-R

S2A: 2.5 x 2.0 mm SMD Package - 6 Pad

33: +3.3±5% VDD Supply Voltage

05: ±50 ppm Temperature Stability

156.250 MHz Nominal Frequency

P: LVPECL Output

A: Automotive Grade

X: -40 ~ + 85°C 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.