



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 12,2024

Specification Title:

Clock Oscillator

Low Power HCSL - Complimentary Output

2.5 x 2.0 millimeter Surface Mount

General Product Specification

Part Number:

S2ALP LPHCSL Series

Electrical Specifications:

Frequency Range		95.000 ~ 160.000				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		1.8 ± 5%	2.5 ± 5%	3.3 ± 5%	1.71~3.63	VDD
Input Current		20	20	20	20	mA Max.
Output Voltage	Logic High (Voh)	0.85	0.85	0.85	0.85	VDD Max.
	Logic Low (Vol)	-0.15	-0.15	-0.15	-0.15	VDD Min.
Output Symmetry (Duty Cycle)		45 ~ 55				%
Output Type		LPHCSL				
Output Load (Terminated to GND)		2				pF
Rise and Fall Time	95.000 to 160.000MHz	0.7	0.7	0.7	0.7	ns Max.
Enable-Disable Function		Tri-State				
Input Enable Voltage		1.26	1.75	2.31	70%VDD	VDD Min.
Input Disable Voltage		0.54	0.75	0.99	30%VDD	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, vibration, and 1st year aging at +25°C.

RoHS Compliant
Pb - Lead Free

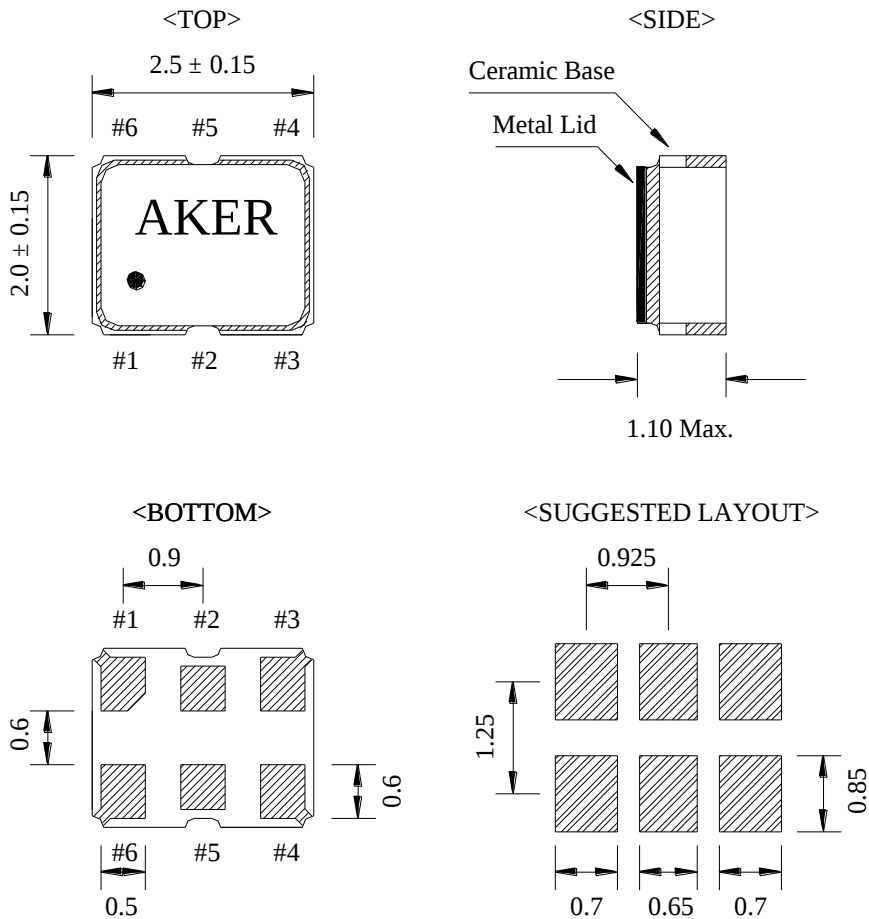
Ltr

Revisions

Date

Appr

Mechanical Outline and Solder Pad Layout:

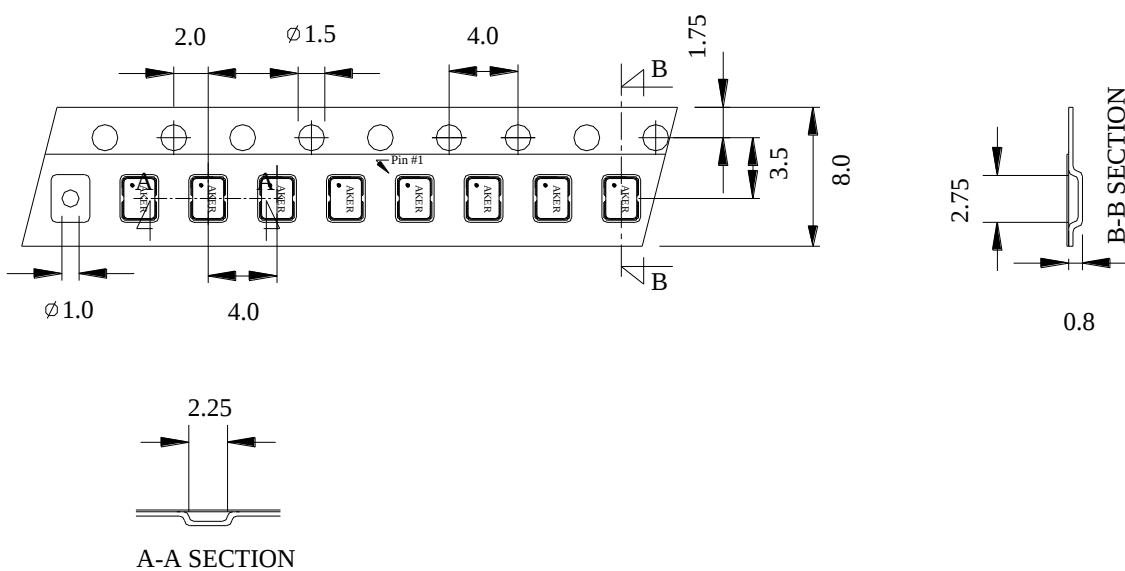


Pin Connection	
PIN No.	Connection
#1	Enable/Disable
#2	NC
#3	GND
#4	Output - Q
#5	Output - QN
#6	VDD

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

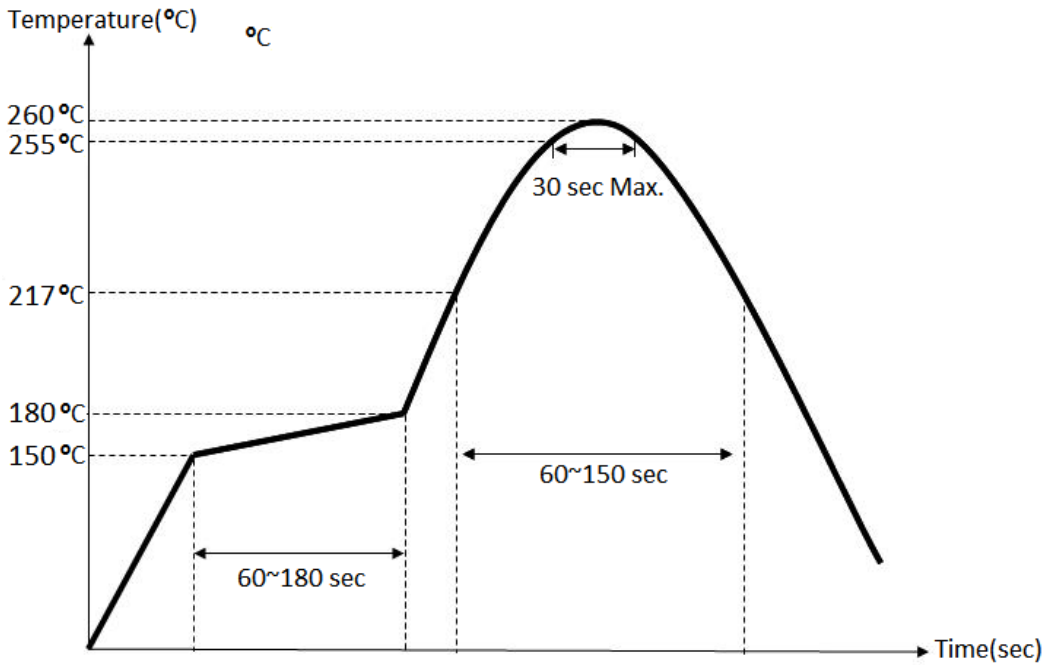
Package is Seam Sealed Ceramic-Metal.
Terminator Pads are Ni/Au.
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	2ALP	2.5 x 2.0 mm - 6 Pad
Supply Voltage	33	+3.3 VDD $\pm$ 5%
	25	+2.5 VDD $\pm$ 5%
	18	+1.8 VDD $\pm$ 5%
	M	+1.71 ~ +3.63 VDD
Temperature Stability	10	$\pm$ 100 ppm
	05	$\pm$ 50 ppm
	025	$\pm$ 25 ppm
Frequency	95.000~160.000	MHz
Output Load	H	LPHCSL
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:

S2ALP3305-156.250-H-X-R

S2ALP: 2.5 x 2.0 mm SMD Package - 6 Pad

33: +3.3 $\pm$ 5% VDD Supply Voltage

05: $\pm$ 50 ppm Temperature Stability

156.250 MHz Nominal Frequency

H: LPHCSL 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.