



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  
LVDS - Complimentary Output  
2.5 x 2.0 millimeter Surface Mount  
General Product Specification**

Part Number:

**S2A LVDS 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		1.8 ± 5%	2.5 ± 5%	3.3 ± 5%	2.375~3.63	VDD
Input Current		20	20	20	20	mA Max.
Output Voltage	Logic High (Voh)	1.60				VDD Max.
	Logic Low (Vol)	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	1.0	ns Max.
	100.000 to 200.000MHz	0.5	0.5	0.5	0.5	
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

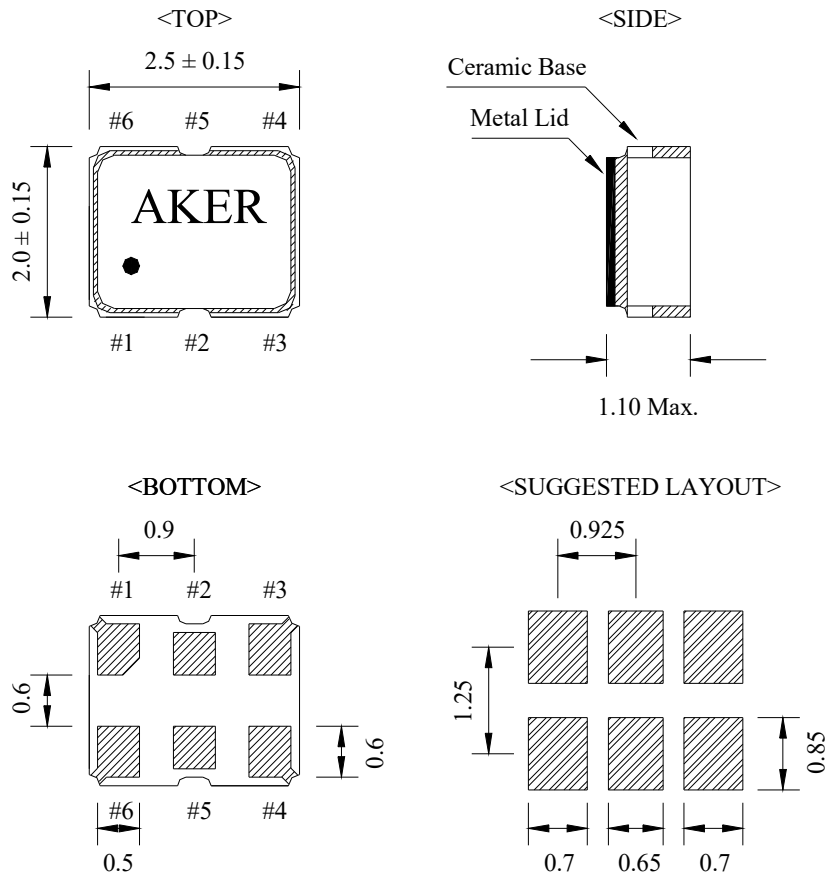
Temperature stability is Inclusive of all conditions:

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.**



### 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%
	18	+1.8 VDD ± 5%
	M	+2.375 ~ +3.63 VDD
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
Frequency	13.500~200.000	MHz
Output Load	L	LVDS
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-L-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

L: LVDS Output

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.