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

All dimensions are millimeters.

CAD:	TCR	
Review:	EG	
Appr:	JL	
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Specification Title:

Clock Oscillator Automotive Grade
LVDS - Complimentary Output
2.0 x 1.6 millimeter Surface Mount
General Product Specification

AEC-Q200 Qualified
IATF 16949 Certified

Part Number: **S1A Auto LVDS Series**

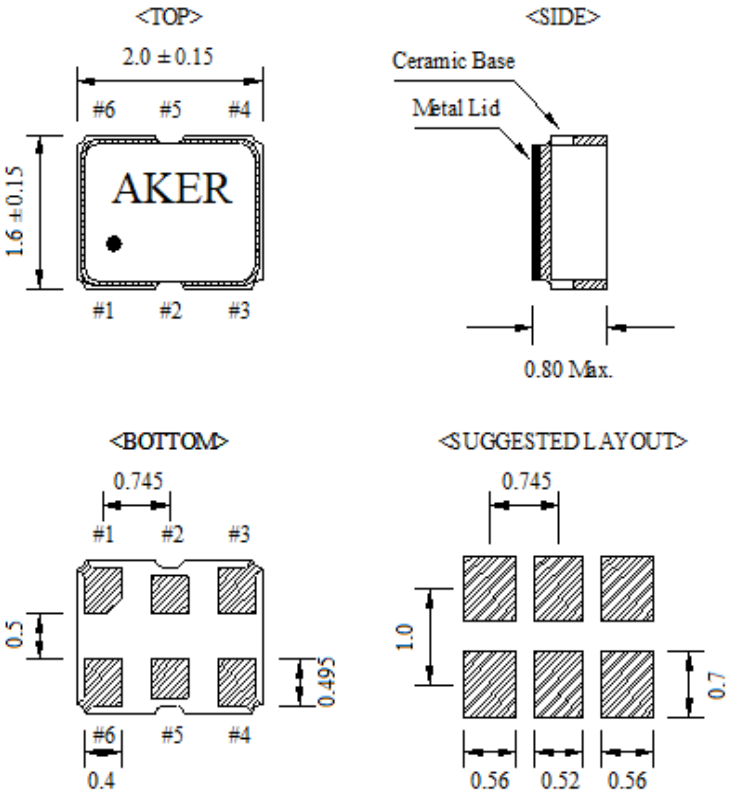
Electrical Specifications:

Frequency Range		100.000 ~ 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		2.5 ± 5%	3.3 ± 5%	2.375~3.63	VDD
Input Current		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_{OD})		247 ~ 454			mV
Offset Voltage (V_{OS})		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		0.5	0.5	0.5	ns Max.
Enable-Disable Function		Tri-State			
Input Enable Voltage		1.75	2.31	70%VDD	VDD Min.
Input Disable Voltage		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, vilbration, and 1st year aging at +25°C.

RoHS Compliant	Ltr	Revisions	Date	Appr
Pb - Lead Free				
AEC-Q200 Qualified				
IATF 16949 Certified				

Mechanical Outline and Solder Pad Layout:

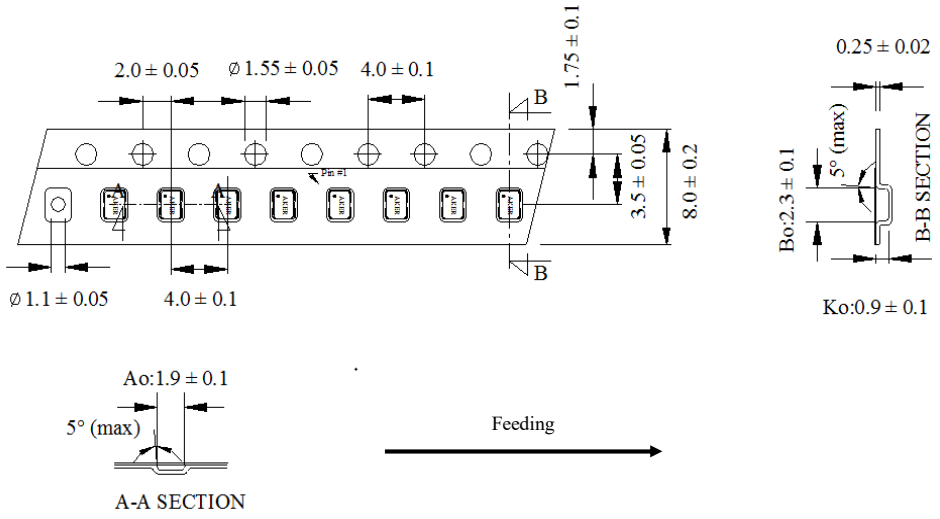


Pin Connection	
PIN No.	Connection
#1	Enable/Disable
#2	NC
#3	GND
#4	Output - Q
#5	Output - QN
#6	VDD

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

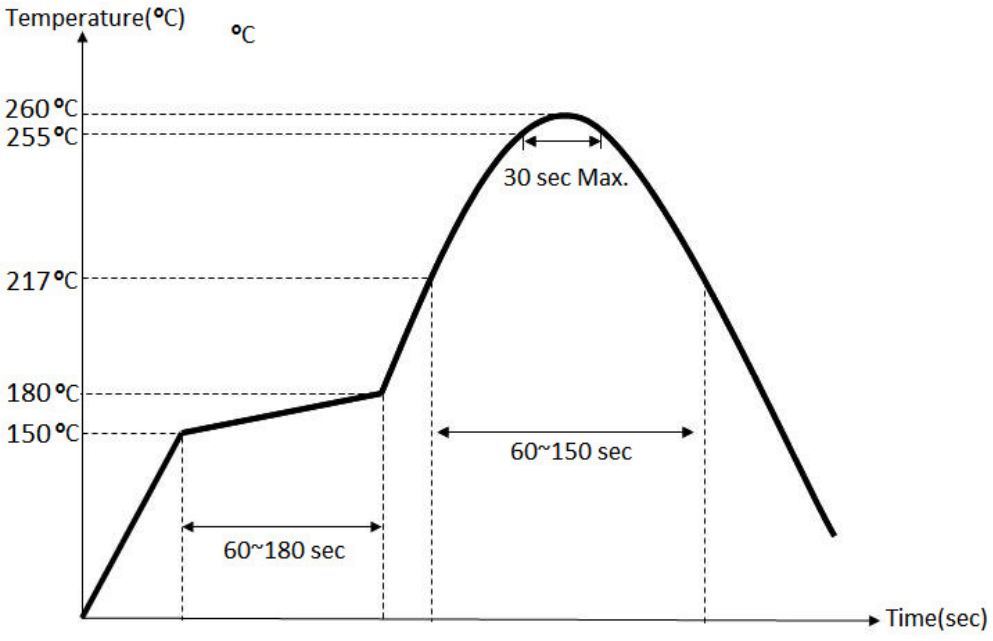
Package is Seam Sealed Ceramic-Metal.
Terminator Pads are Ni/Au.
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	1A	2.0 x 1.6 mm - 6 Pad
Supply Voltage	33	+3.3 VDD ± 5%
	25	+2.5 VDD ± 5%
	M	+2.375 ~ +3.63 VDD
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
	-	
Frequency	100.000~160.000	MHz
	-	
Output Load	L	LVDS
	-	
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:

S1A3305-156.250-L-A-X-R

S1A: 2.0 x 1.6 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

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.