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:

HCMOS Output Clock Oscillator
Ultra Miniature
2.5 x 2.0 millimeter Surface Mount
General Product Specification

Part Number:	**S2 Series**	

Electrical Specifications:

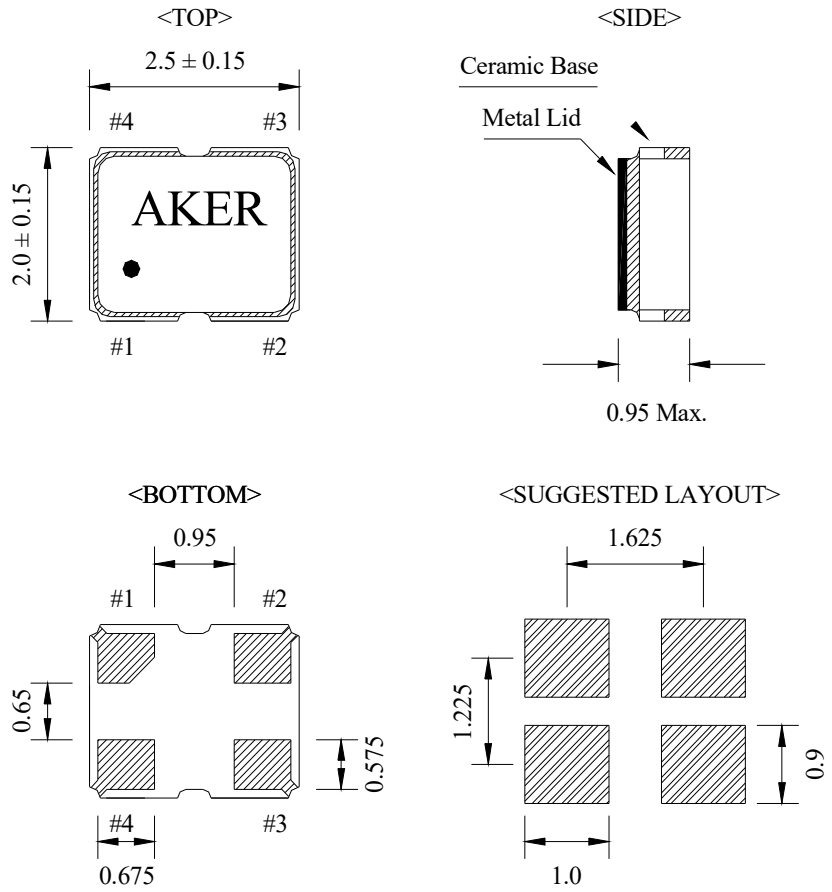
Frequency Range		2.000~50.000	2.000~50.000	2.000~125.000	2.000~50.000	2.000~50.000	MHz
Frequency Stability		±20 ~ ±100					ppm
Aging per Year		±3					ppm Max.
Operating Temperature Range	Standard	-20 ~ +70					°C
	Extended	-40 ~ +85 Or Specify (−40~+125 is available)					
Storage Temperature Range		-55 ~ +125					
Supply Voltage		1.8 ± 5%	2.5 ± 5%	3.3 ± 10%	1.62 ~ 3.63	5.0 ± 10%	VDD
Input Current	2.000 to 9.999MHz	3	6	7	7	10	mA Max.
	10.000 to 19.999MHz	5	7	7	7	12	
	20.000 to 31.999MHz	5	8	12	12	15	
	32.000 to 50.000MHz	10	20	20	20	22	
	50.001 to 125.000MHz	-	-	30	-	-	
Output Voltage	Logic High (Voh)	90%					VDD Min.
	Logic Low (Vol)	10%					VDD Max.
Output Symmetry (Duty Cycle)	Standard	40 ~ 60 (at 50% VDD)					%
	Tight	45 ~ 55 (at 50% VDD)					
Output Level		CMOS					
Output Load		15					pF Max.
Rise and Fall Time	2.000 to 9.999MHz	5	7	6	7	6	ns Max.
	10.000 to 19.999MHz	5	7	6	7	6	
	20.000 to 31.999MHz	5	6	5	6	5	
	32.000 to 50.000MHz	5	6	5	6	5	
	50.001 to 125.000MHz	-	-	6	-	-	
Phase Jitter (12 KHz to 20 MHz)		1					ps Max. RMS
Enable-Disable Function		Tri-State					
Start Up Time		10					ms Max.

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:

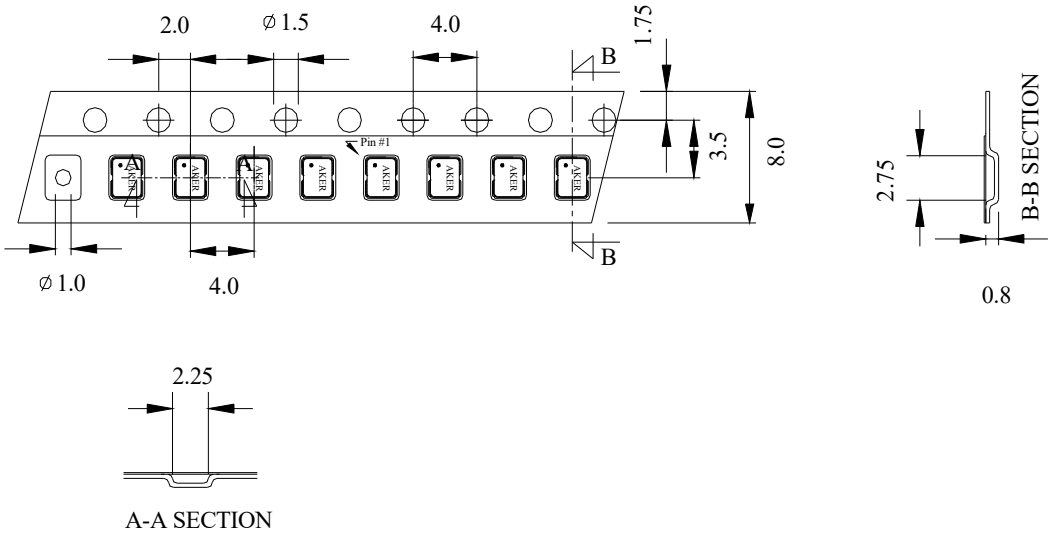


Pin Connection	
PIN No.	Connection
#1	Enable/Disable
#2	GND
#3	Output
#4	VDD

Enable/Disable Function	
PIN #1	PIN #3
HIGH or OPEN	Operating
LOW	High Impedance

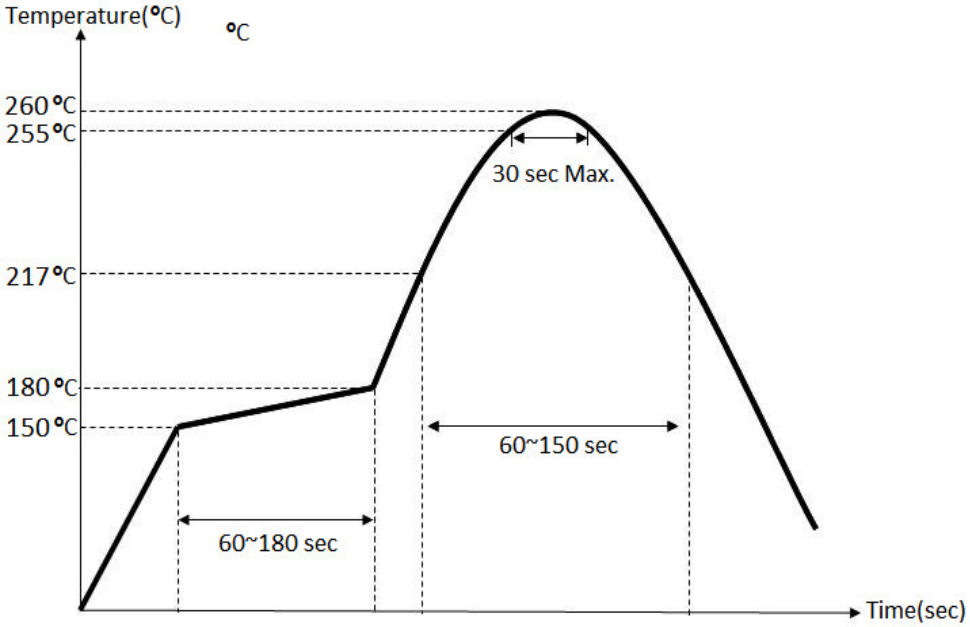
Package is Seam Sealed Ceramic-Metal.
Terminator Pads are Ni/Au.
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	2	2.0 x 2.5 mm
Supply Voltage	50	+5.0 VDD ± 10%
	33	+3.3 VDD ± 10%
	25	+2.5 VDD ± 5%
	18	+1.8 VDD ± 5%
	M	+1.62 ~ +3.63 VDD
Temperature Stability	10	±100 ppm
	05	±50 ppm
	025	±25 ppm
Duty Cycle	See Notes	40%~60%
	T	45%~55%
	-	
Frequency	2.000~125.000	MHz
	-	
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
	R3	3000pcs Reel

Part Number Example:

S23305T-50.000-X-R

S2: 2.0 x 2.5 mm SMD Package

33: +3.3±10% VDD Supply Voltage

05: ±50 ppm Temperature Stability

T: 45%~55% Tight Symmetry

50.000 MHz Nominal Frequency

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.