Accurate Kinetic Energy No.11-3 Jianguo Rd., Tanzi Dist., 42760 Taiwan			Specification Title: **HCMOS Output Clock Oscillator Spread Spectrum - Low EMI 2.5 x 2.0 millimeter Surface Mount General Product Specification**
All dimensions are millimeters.			
CAD:	TCR		
Review:	EG		
Appr:	JL		
Page:	1/4	Date: October 18,2024	

Part Number:	**S2 Low EMI Series**	

Electrical Specifications:

Frequency Range		10.000~40.000			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%	VDD
Input Current	10.000 to 40.000MHz	10	12	15	mA Max.
Output Voltage	Logic High (Voh)	90%			VDD Min.
	Logic Low (Vol)	10%			VDD Max.
Output Symmetry (Duty Cycle)	Standard	40 ~ 60			%
	Extended	45 ~ 55			
Output Type		CMOS			
Output Load		15			pF Max.
Rise and Fall Time	10.000 to 40.000MHz	7	6	5	ns Max.
Enable-Disable Function		Tri-State			
Input Enable Voltage		70%			VDD Min.
Input Disable Voltage		30%			VDD Max.
Modulation Frequency		30 ~ 300			KHz
Spread Spectrum Modulation	Center Spread	±0.78	±0.54	±0.35	% Typ.
Start Up Time		5			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.

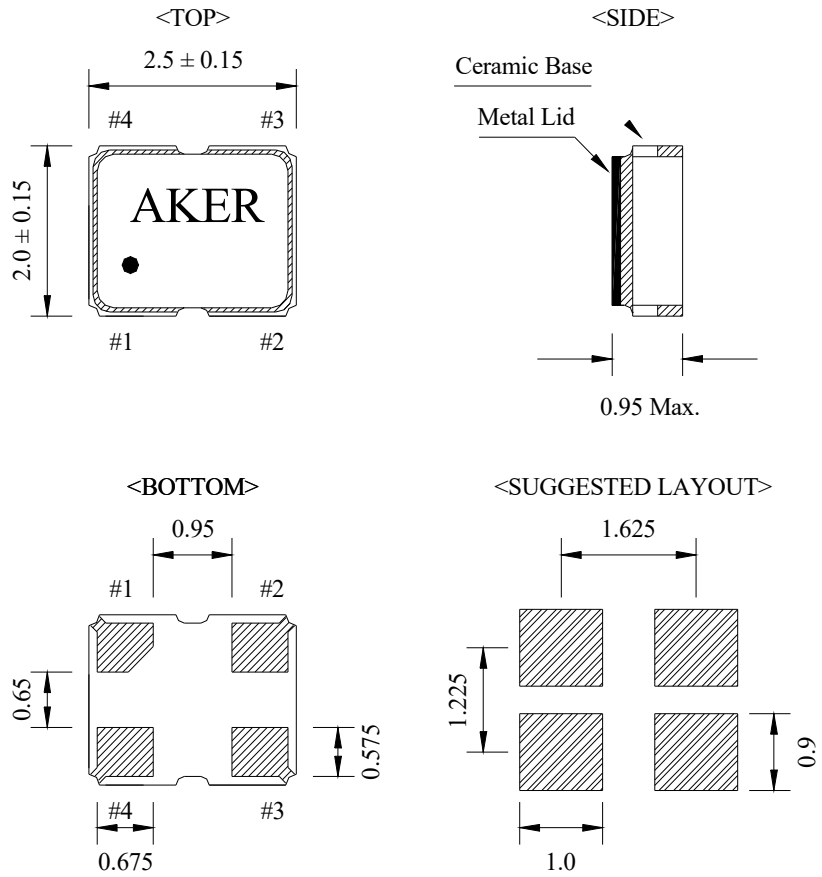
RoHS Compliant
Pb - Lead Free

Ltr	Revisions	Date	Appr

Spread Spectrum Modulation Specifications:

Supply Voltage	Center Spread	
3.3 ± 5%	LE0.35	±0.35%
2.5 ± 5%	LE0.54	±0.54%
1.8 ± 5%	LE0.78	±0.78%

Mechanical Outline and Solder Pad Layout:

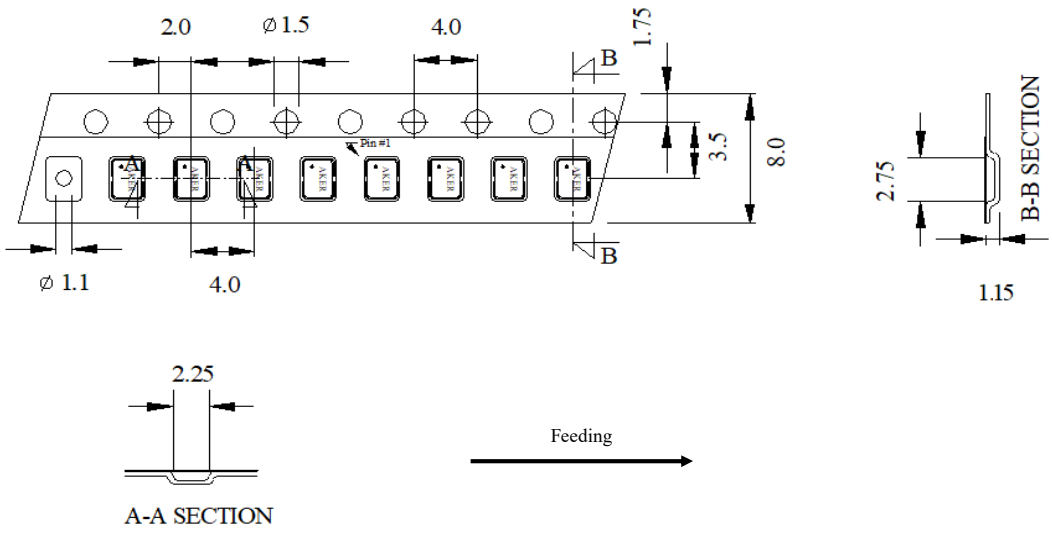


Pin Connection	
PIN No.	Connection
#1	Enable/Disable
#2	GND
#3	Output
#4	VDD

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

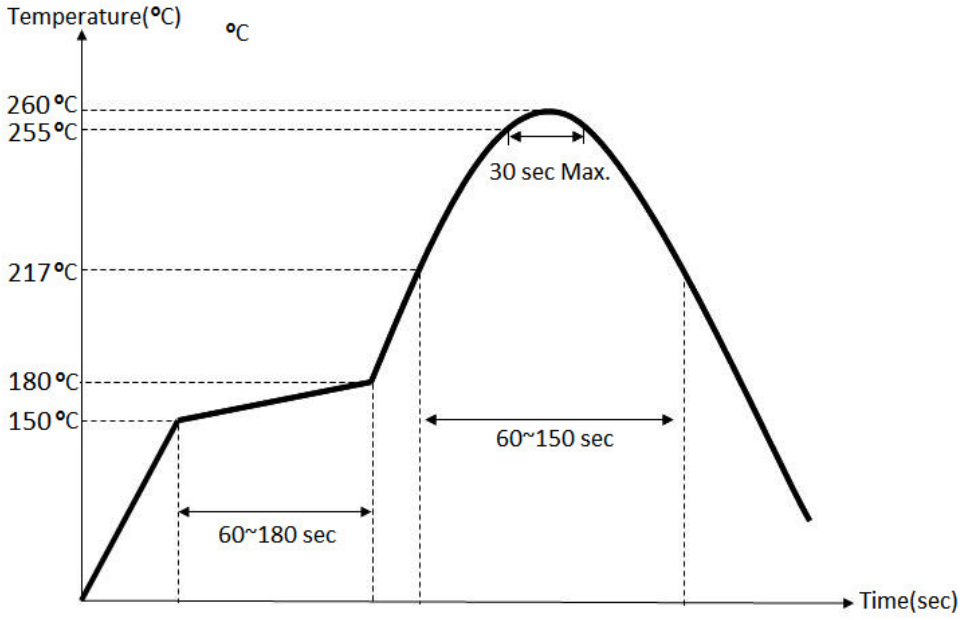
Package is Seam Sealed Ceramic-Metal.
Terminator Pads are Ni/Au.
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	2	2.5 x 2.0 mm
Supply Voltage	33	+3.3 VDD ± 5%
	25	+2.5 VDD ± 5%
	18	+1.8 VDD ± 5%
Temperature Stability	10	±100 ppm
	05	±50 ppm
	03	±30 ppm
	025	±25 ppm
Duty Cycle	See Notes	40%~60%
	T	45%~55%
	-	
Frequency	10.000~40.000	MHz
	-	
Temperature Range	See Notes	-20 ~ +70 °C
	X	-40 ~ +85 °C
	X1	-40 ~ +125 °C
	X2	-40 ~ +105 °C
	-	
Spread Spectrum Modulation (Center Spread)	LE(Center Spread)	±0.35%
		±0.54%
		±0.78%
	-	
Packaging	M	250pcs Reel
	R	1000pcs Reel
	R3	3000pcs Reel

Part Number Example:

S23305T-24.000-X-LE0.35-R

S2: 2.5 x 2.0 mm SMD Package

33: +3.3±10% VDD Supply Voltage

05: ±50 ppm Temperature Stability

T: 45%~55% Tight Symmetry

24.000 MHz Nominal Frequency

X: -40 ~ + 85°C Temperature Range

LE0.35: ±0.35% Center Spread (See Page 2 For Other Specifications)

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.