



Accurate Kinetic Energy

No.11-3 Jianguo Rd., T.E.P.Z. 42760 Taiwan, ROC

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

Page: 1/4 Date: August 01,2022

### Specification Title:

Temperature Compensated

Crystal Oscillator

Automotive Grade

TCXO - Ceramic Package

2.5 x 2.0 millimeter Surface Mount

Part Number:

TX22 Auto Series

### Electrical Specifications:

Frequency Range		10.000 to 52.000	MHz
Frequency Tolerance		±2.0	ppm Max.
Frequency Stability vs. Operating Temperature		±0.5 ~ ±2.0	
Frequency Stability vs. Supply Voltage Change		±0.2	
Frequency Stability vs. 10% Load Change		±0.2	
Aging per Year		±1.0	
Operating Temperature Range	Standard	-20 to +70	°C
	Extended	-40 to +85	
Storage Temperature Range		-55 to +125	
Supply Voltage		1.8 ± 5%	VDC
		2.5 ± 5%	
		3.3 ± 5%	
		1.68 ~ 3.63	
Input Current		2.5	mA Max.
Output Level		0.8	Vp-p Min.
Output Waveform		Clipped Sinewave	
Output Load		10KΩ // 10pF	
Phase Noise	@100Hz Offset	-114	dBc/Hz Typ.
	@1KHz Offset	-131	
	@10KHz Offset	-148	
Start Up Time		2	ms Max.

RoHS Compliant  
Pb - Lead Free

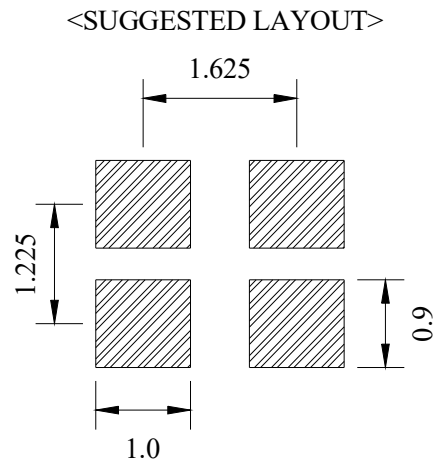
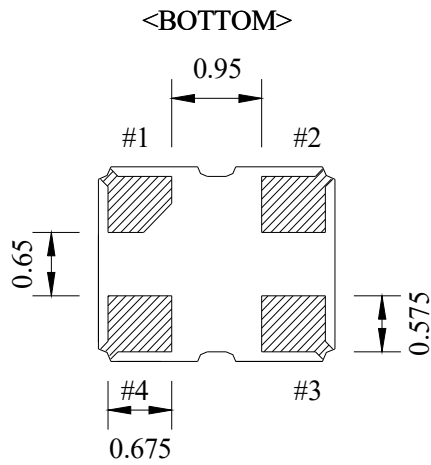
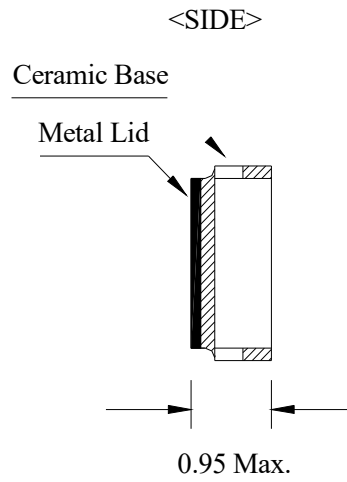
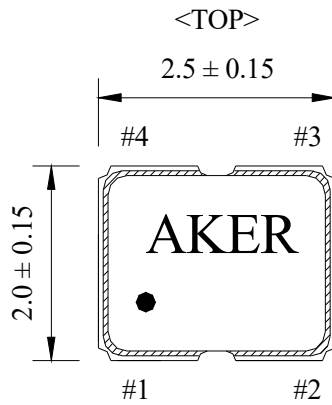
Ltr

Revisions

Date

Appr

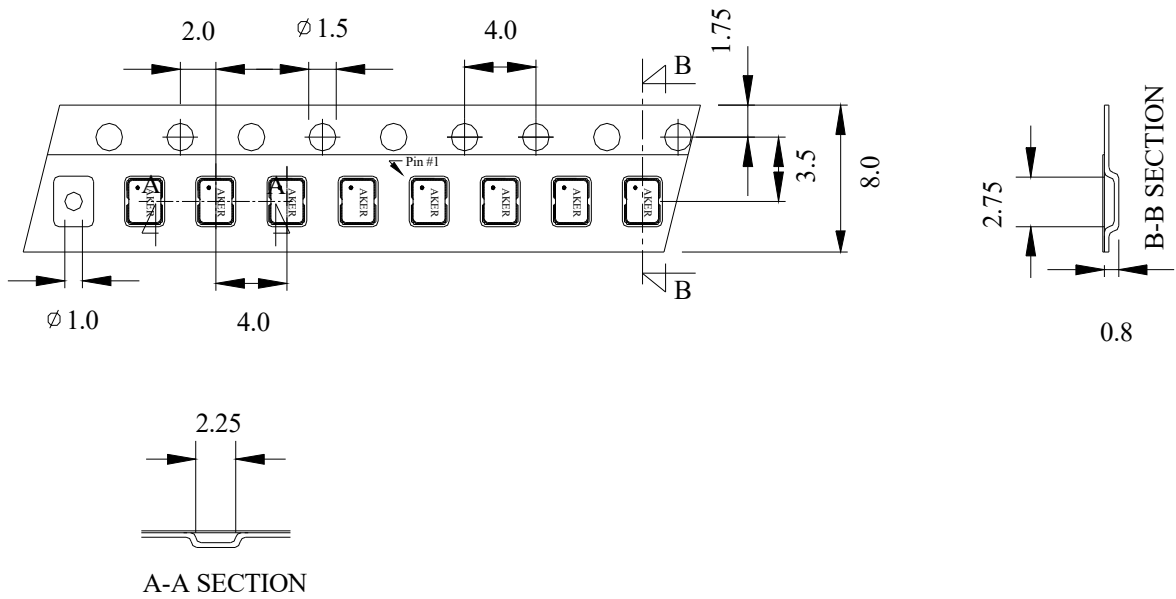
**Mechanical Outline and Solder Pad Layout:**



PIN No.	Connection
#1	NC / GND
#2	GND
#3	Output
#4	VDC

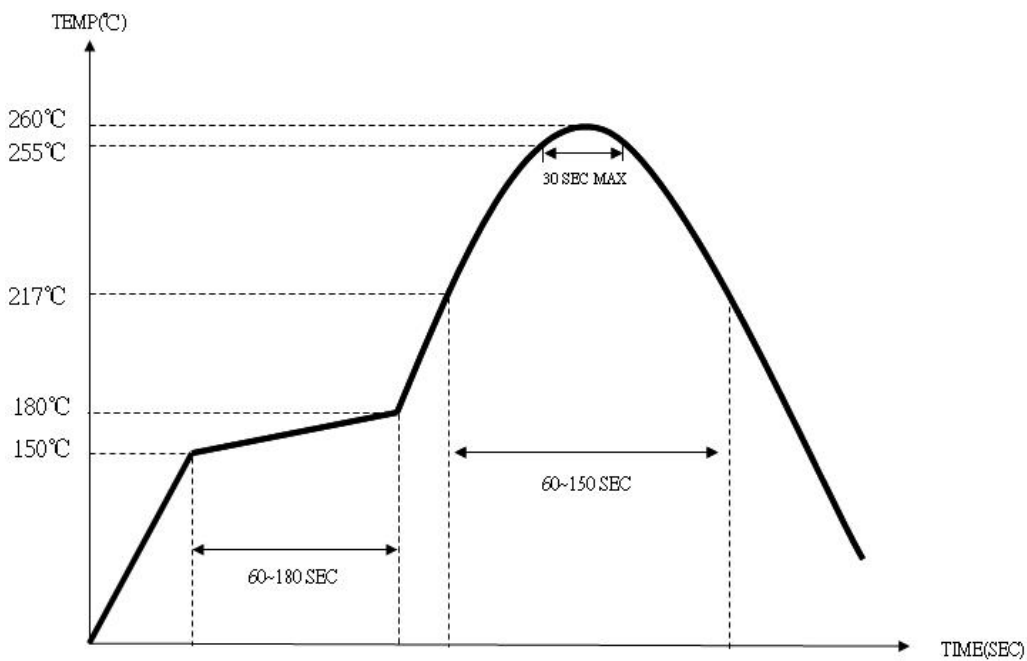
**Package is Seam Sealed Ceramic-Metal.  
Dimensions are millimeters.**

**Carrier Tape Dimensions:**



**Dimensions are millimeters.**

**Solder Reflow Characteristics:**



### How to build a Part Number:

<b>Series</b>	<b>TX</b>	<b>Parameter</b>
<b>Package</b>	<b>22</b>	<b>2.5 x 2.0 mm</b>
	-	
<b>Supply Voltage</b>	<b>18</b>	<b>1.8 VDC ± 5%</b>
	<b>25</b>	<b>2.5 VDC ± 5%</b>
	<b>33</b>	<b>3.3 VDC ± 5%</b>
	<b>M</b>	<b>1.68 ~ 3.63 VDC</b>
<b>Temperature Stability</b>	<b>005</b>	<b>±0.5 ppm</b>
	<b>010</b>	<b>±1.0 ppm</b>
	<b>020</b>	<b>±2.0 ppm</b>
<b>Output Waveform</b>	<b>S</b>	<b>Clipped Sinewave</b>
	-	
<b>Frequency</b>	<b>10.000~52.000</b>	<b>MHz</b>
	-	
<b>AECQ-200</b>	<b>A</b>	<b>Automotive</b>
	-	
<b>Temperature Range</b>	<b>See Notes</b>	<b>-20 to +70 °C</b>
	<b>X</b>	<b>-40 to +85 °C</b>
	-	
<b>Packaging</b>	<b>R</b>	<b>1000pcs Reel</b>
	<b>R3</b>	<b>3000pcs Reel</b>

### Part Number Example:

TX22-3320S-26.000-A-X-R

TX22: 2.5 x 2.0 mm SMD Package

33: +3.3 VDC Supply Voltage

020: ±2.0 ppm Temperature Stability

S: Clipped Sinewave Output

26.000 MHz Nominal Frequency

X: -40 to + 85°C Temperature Range

R: Tape and Reel Packaging

### Notes:

- 1- Standard 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 1000 pieces are shipped bulk in ESD pouches.
- 4- Specification subject to change without notice.