



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**

TCXO - Ceramic Package

2.5 x 2.0 millimeter Surface Mount

Part Number:

TX22 Series

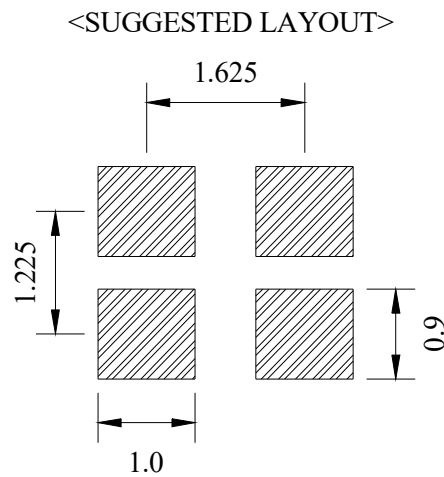
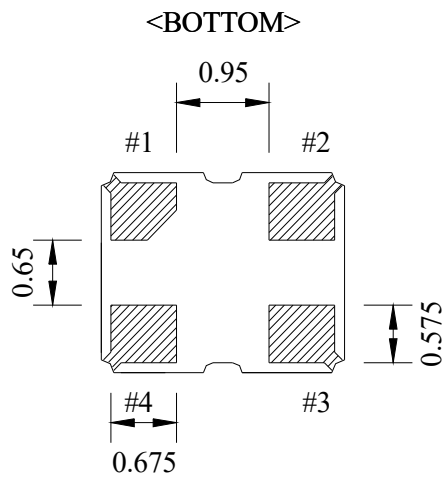
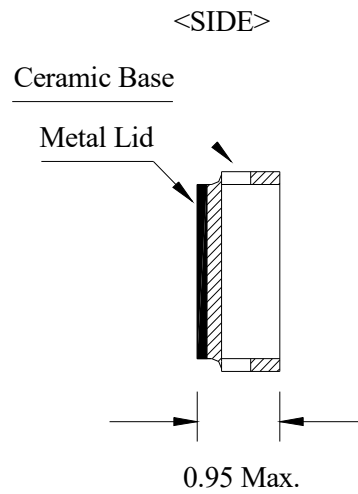
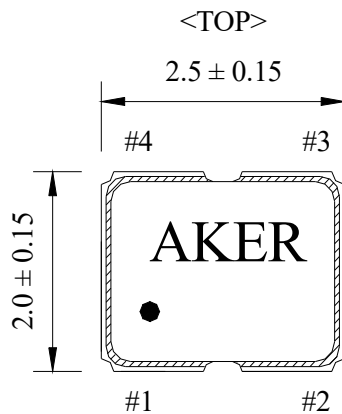
Electrical Specifications:

| | | | |
|---|---------------|------------------|-------------|
| 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:

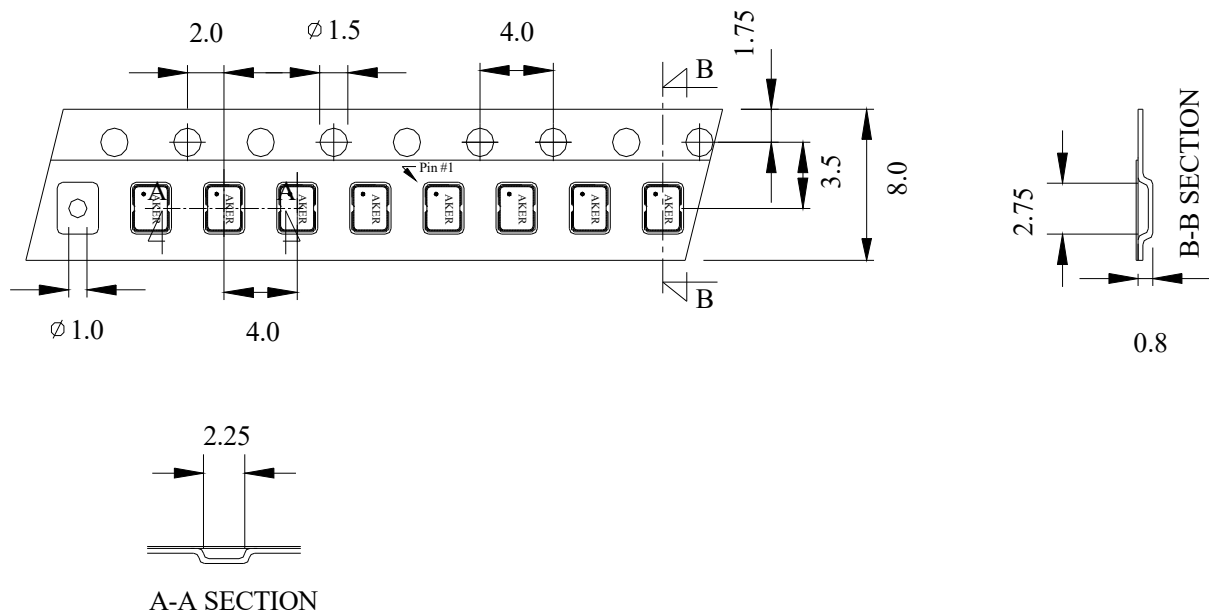


| PIN No. | Connection |
|---------|------------|
| #1 | NC / GND |
| #2 | GND |
| #3 | Output |
| #4 | VDC |

Package is Seam Sealed Ceramic-Metal.

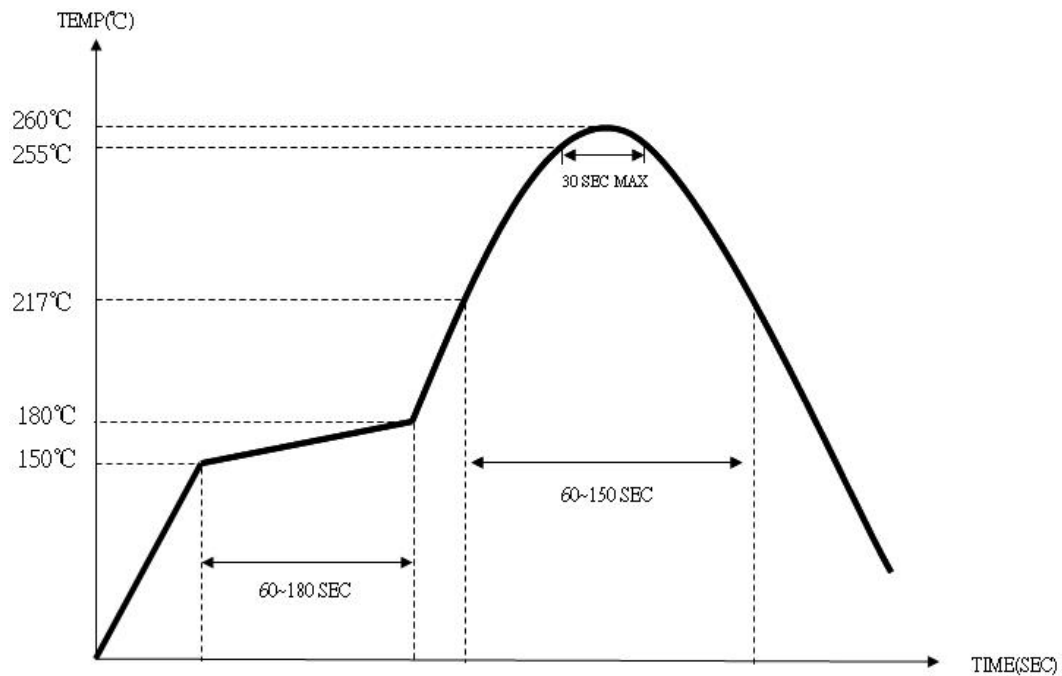
Dimensions are millimeters.

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

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

Part Number Example:

TX22-3320S-26.000-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.