



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:

**Programmable Clock Oscillator  
Miniature - Low Profile  
7.0 x 5.0 millimeter Surface Mount  
General Product Specification**

Part Number:

**S7P Series**

**Electrical Specifications:**

|                              |                       |                       |               |               |          |
|------------------------------|-----------------------|-----------------------|---------------|---------------|----------|
| Frequency Range              |                       | 1.000~110.000         | 1.000~166.000 | 1.000~200.000 | MHz      |
| Frequency Stability          |                       | ±25 ~ ±100            |               |               | ppm      |
| Aging per Year               |                       | ±3                    |               |               | ppm Max. |
| Operating Temperature Range  | Standard              | -20 ~ +70             |               |               | °C       |
|                              | Extended              | -40 ~ +85             |               |               |          |
| Storage Temperature Range    |                       | -55 ~ +125            |               |               |          |
| Supply Voltage               |                       | 1.8 ± 5%              | 2.5 ± 5%      | 3.3 ± 10%     | VDD      |
| Input Current                | 1.000 to 9.999MHz     | 8                     | 8             | 8             | mA Max.  |
|                              | 10.000 to 19.999MHz   | 10                    | 10            | 10            |          |
|                              | 20.000 to 31.999MHz   | 12                    | 12            | 12            |          |
|                              | 32.000 to 49.999MHz   | 15                    | 15            | 15            |          |
|                              | 50.000 to 79.999MHz   | 20                    | 20            | 20            |          |
|                              | 80.000 to 99.999MHz   | 25                    | 25            | 25            |          |
|                              | 100.000 to 200.000MHz | 30                    | 30            | 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           | 1.000 to 31.999MHz    | 6                     | 6             | 6             | ns Max.  |
|                              | 32.000 to 200.000MHz  | 5                     | 5             | 5             |          |
| Enable-Disable Function      |                       | Tri-State             |               |               |          |
| Start Up Time                |                       | 10                    |               |               | ms Max.  |

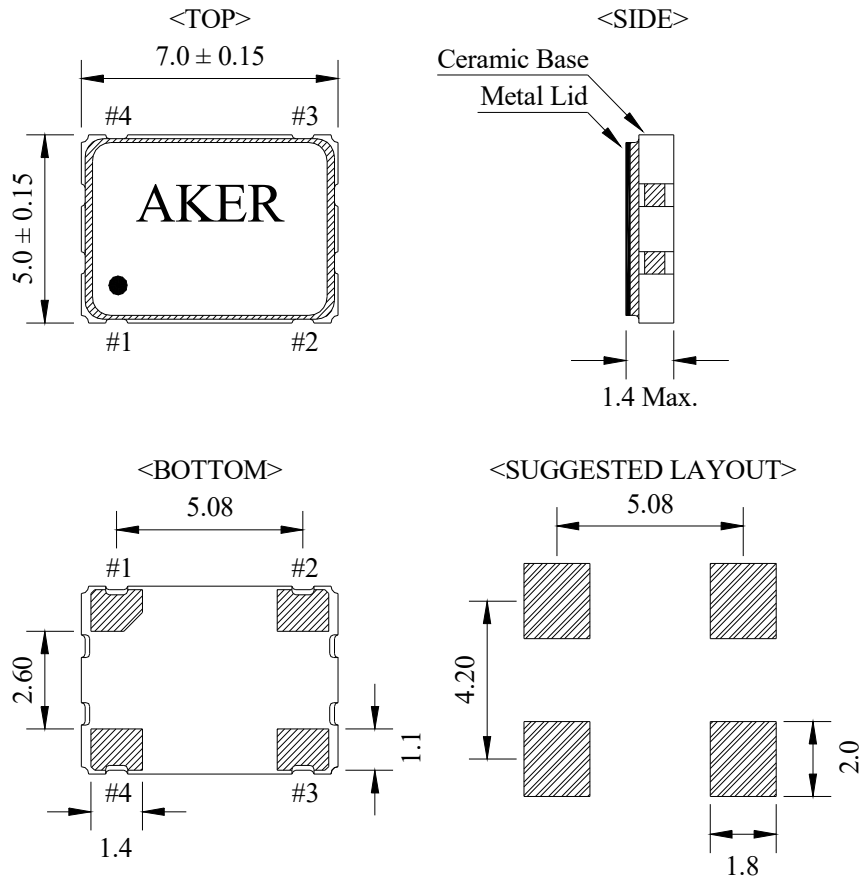
Temperature stability is Inclusive of all conditions:

Calibration Tolerance at +25°C, frequency stability over the operating temperature range, supply voltage change, output load change, shock, vibration, 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            |

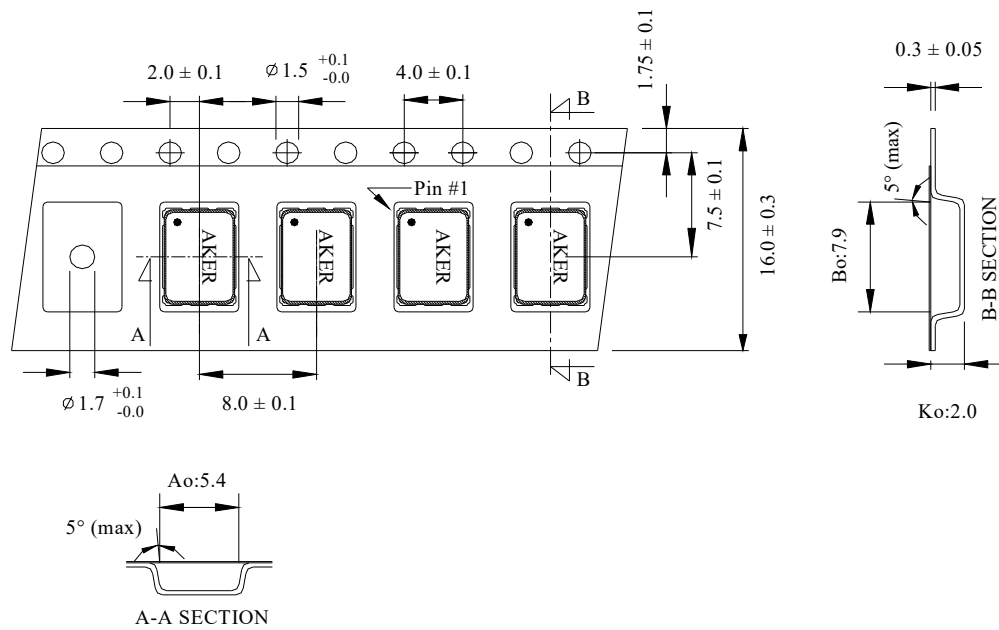
| Enable/Disable Function |                |
|-------------------------|----------------|
| PIN #1                  | PIN #3         |
| HIGH or OPEN            | Operating      |
| LOW                     | High Impedance |

**Package is Seam Sealed Ceramic-Metal.**

**Terminator Pads are Ni/Au.**

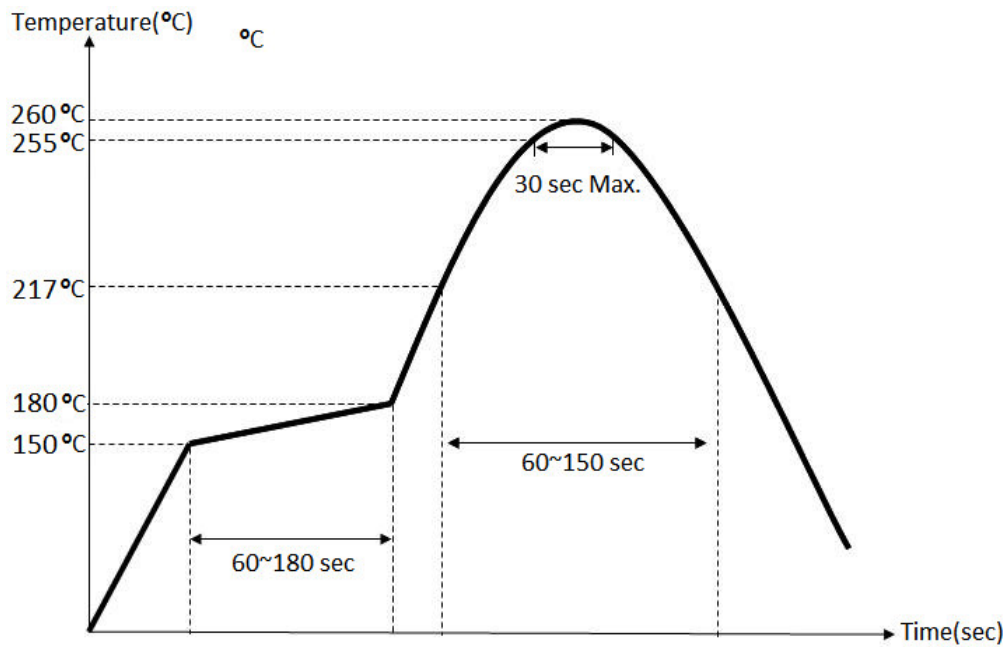
**Dimensions are millimeters.**

### Carrier Tape Dimensions:



Dimensions are millimeters.

### Solder Reflow Characteristics:



### How to build a Part Number:

|                       |              |                |
|-----------------------|--------------|----------------|
| Series                | S            | Parameter      |
| Package               | 7P           | 7.0 x 5.0 mm   |
|                       |              |                |
| Supply Voltage        | 33           | +3.3 VDD ± 10% |
|                       | 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             | 1.000~54.000 | MHz            |
|                       | -            |                |
| Temperature Range     | See Notes    | -20 ~ +70 °C   |
|                       | X            | -40 ~ +85 °C   |
|                       | -            |                |
| Packaging             | M            | 250pcs Reel    |
|                       | R            | 1000pcs Reel   |

### Part Number Example:

S7P3305T-25.000-X-R

S7P: 7.0 x 5.0 mm SMD Package

33: +3.3±5% VDD Supply Voltage

05: ±50 ppm Temperature Stability

T: 45%~55% Tight Symmetry

25.000 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.