



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:

**HC MOS Output Clock Oscillator  
Low Profile  
7.0 x 5.0 millimeter Surface Mount  
General Product Specification**

Part Number:

**S7 Series**

**Electrical Specifications:**

|                                 |                       |   |              |               |              |              |             |
|---------------------------------|-----------------------|---|--------------|---------------|--------------|--------------|-------------|
| Frequency Range                 |                       | 0.500~40.000                                  | 0.500~75.000 | 0.500~156.250 | 0.500~40.000 | 0.500~40.000 | 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                   | 0.500 to 9.999MHz     | 5   | 6            | 7             | 7            | 10           | mA Max.     |
|                                 | 10.000 to 19.999MHz   | 6   | 7            | 7             | 7            | 15           |             |
|                                 | 20.000 to 31.999MHz   | 6   | 8            | 12            | 12           | 25           |             |
|                                 | 32.000 to 49.999MHz   | 15  | 20           | 20            | 20           | 35           |             |
|                                 | 50.000 to 79.999MHz   | -   | 20           | 25            | -            | -            |             |
|                                 | 80.000 to 99.999MHz   | -   | -            | 30            | -            | -            |             |
|                                 | 100.000 to 156.250MHz | -   | -            | 40            | -            | -            |             |
| 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 Load                     |                       | 15  |              |               |              |              | pF Max.     |
|                                 |                       | 30  |              |               |              |              |             |
| Rise and Fall Time              | 0.500 to 31.999MHz    | 5   | 5            | 10            | 10           | 10           | ns Max.     |
|                                 | 32.000 to 49.999MHz   | 5   | 5            | 10            | 10           | 6            |             |
|                                 | 50.000 to 79.999MHz   | -   | 4            | 8             | -            | -            |             |
|                                 | 80.000 to 99.999MHz   | -   | -            | 5             | -            | -            |             |
|                                 | 100.000 to 156.250MHz | -   | -            | 4             | -            | -            |             |
| Phase Jitter (12 KHz to 20 MHz) |                       | 1   |              |               |              |              | ps Max. RMS |
| Enable-Disable Function         |                       | Tri-State                                     |              |               |              |              |             |
| Start Up Time                   |                       | 10  |              |               |              |              | ms Max.     |

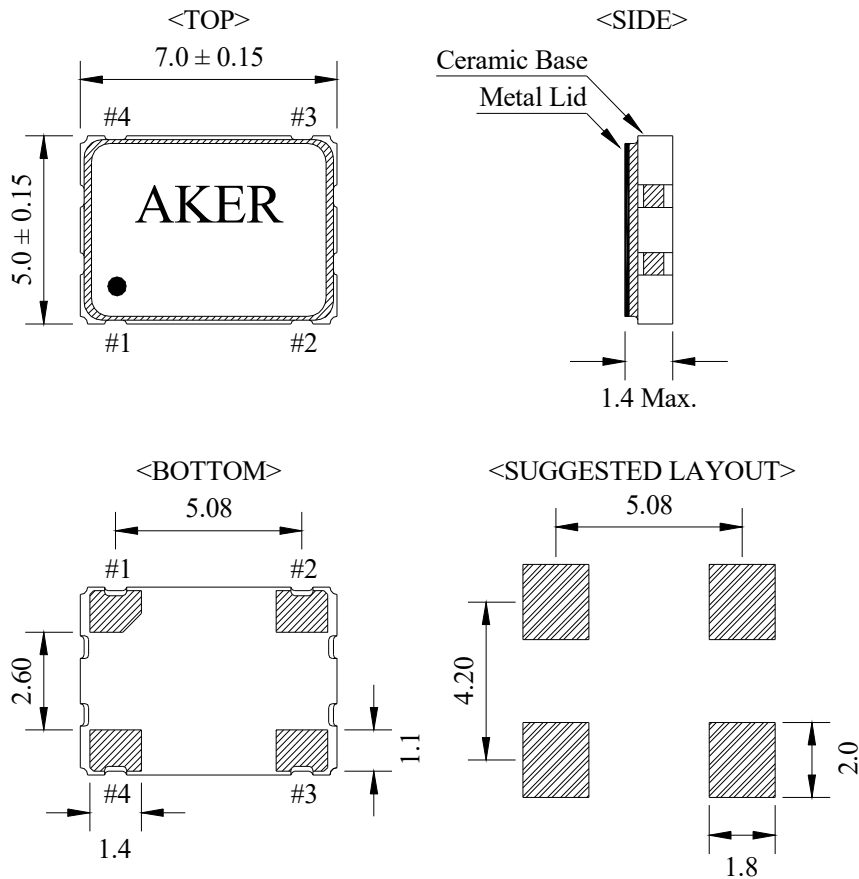
Temperature stability is Inclusive of all conditions:

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

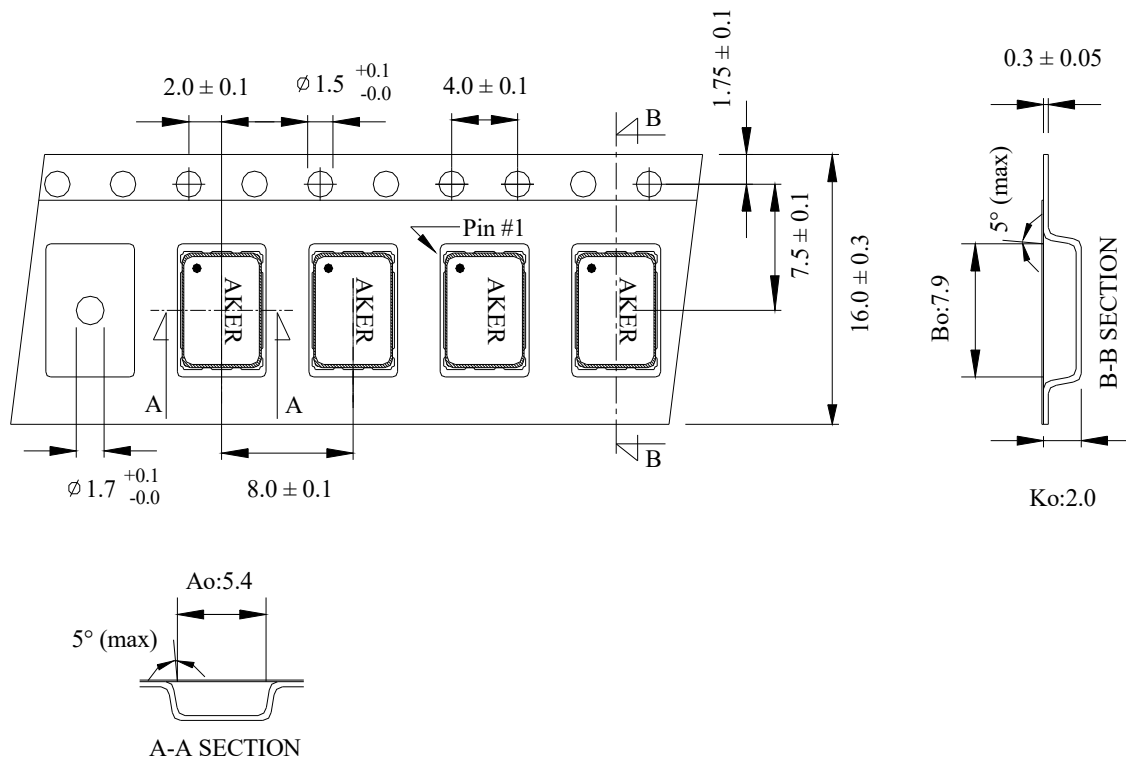
| Enable/Disable Function |                |
|-------------------------|----------------|
| PIN #1                  | PIN #3         |
| HIGH or OPEN            | Operating      |
| LOW                     | High Impedance |

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

**Terminator Pads are Ni/Au.**

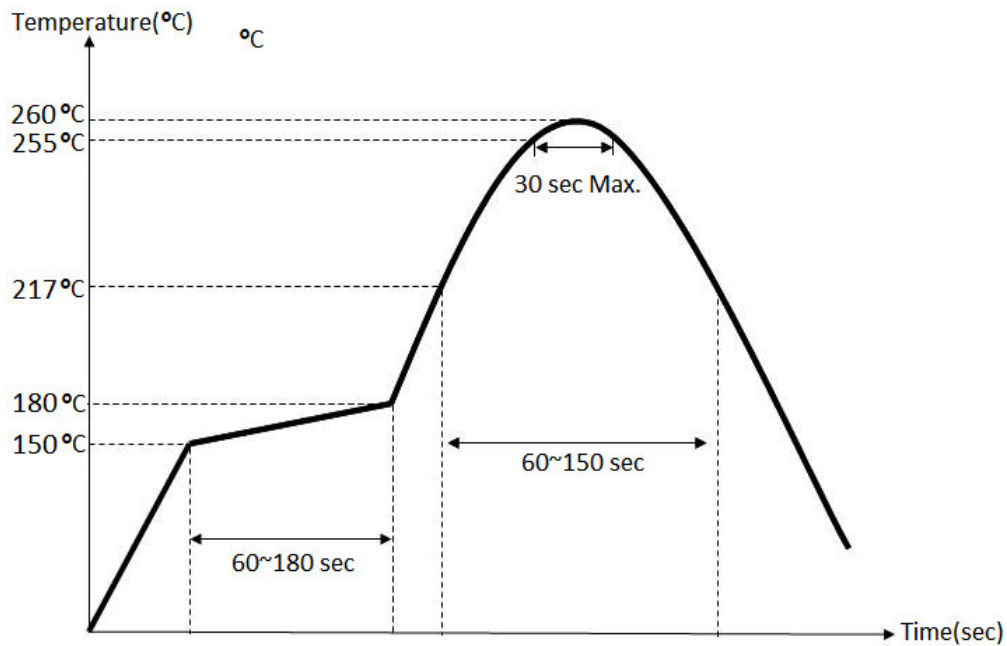
**Dimensions are millimeters.**

### Carrier Tape Dimensions:



Dimensions are millimeters.

### Solder Reflow Characteristics:



### How to build a Part Number:

|                       |               |                   |
|-----------------------|---------------|-------------------|
| Series                | S             | Parameter         |
| Package               | 7             | 7.0 x 5.0 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           |
|                       | 020           | ±20 ppm           |
|                       |               |                   |
| Duty Cycle            | See Notes     | 40%~60%           |
|                       | T             | 45%~55%           |
|                       |               |                   |
| Frequency             | 0.500~156.250 | MHz               |
|                       |               |                   |
| Temperature Range     | See Notes     | -20 ~ +70 °C      |
|                       | X             | -40 ~ +85 °C      |
|                       | X1            | -40 ~ +125 °C     |
|                       | X2            | -40 ~ +105 °C     |
|                       |               |                   |
| Output Load           | 15            | pF Max            |
|                       | 30            |                   |
|                       |               |                   |
| Packaging             | M             | 250pcs Reel       |
|                       | R             | 1000pcs Reel      |

### Part Number Example:

S73305T-50.000-X-15-R

S7: 5.0 x 7.0 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

15: 15 pF Max Output Load

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.