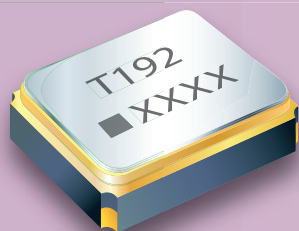


# SMD Seam Temperature Sensing Crystals 2.5 x 2.0 x 1.0 mm AE Series



## Features

- High precision and high frequency stability.
- Excellent thermal coupling between thermistor and crystal.
- Application in mobile communications.
- RoHS Compliant / Pb Free.

## Electrical Specifications

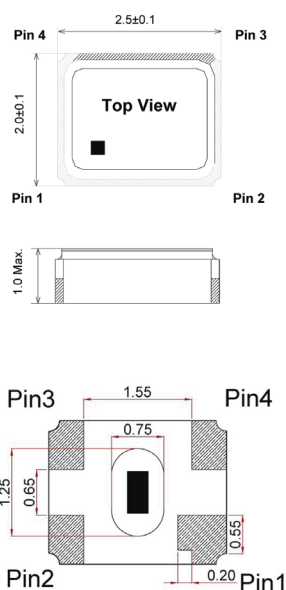
| Item / Type                                          | AE                                |
|------------------------------------------------------|-----------------------------------|
| Frequency Range                                      | 19.2 MHz                          |
| Frequency Tolerance (at 25°C)                        | ± 10 ppm , or specify             |
| Frequency Stability Over Operating Temperature Range | ± 30 ppm , or specify             |
| Operating Temperature Range                          | -40 ~ 105 °C or specify           |
| Shunt Capacitance (C0)                               | 3 pF Max.                         |
| Drive Level                                          | 1 ~ 200 μW ( 50 μW typical )      |
| Load Capacitance                                     | 8 pF , 10 pF , 12 pF , or specify |
| Storage Temperature Range                            | -40 ~ +105 °C                     |
| Thermistor Resistance (25°C)                         | 100 kΩ , or specify               |
| Thermistor B-constant (25~50°C)                      | 4250, or specify                  |
| Reliability Standard                                 | AEC-Q200                          |

## Equivalent Series Resistance(ESR)

### Fundamental

19.2 MHz | 100 Ω Max.

## Dimensions

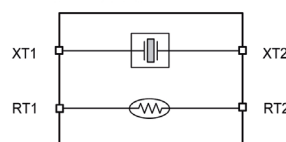


### PIN FUNCTION

|       | Symbol | Function              |
|-------|--------|-----------------------|
| Pin 1 | XT1    | XTAL Terminal 1       |
| Pin 2 | RT2    | Thermistor Terminal 2 |
| Pin 3 | XT2    | XTAL Terminal 2       |
| Pin 4 | RT1    | Thermistor Terminal 1 |

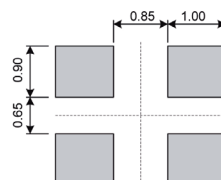
Note: Pin 2 is connected to the metal lid and thermistor  
Pin 4 is connected to the thermistor only

### BLOCK DIAGRAM



Note: RT2 shall be connected to GND is recommended

### SUGGESTED LAYOUT



Units: mm