

# XQ Type

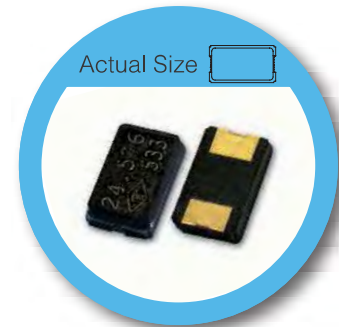
## 8.0 x 4.5 mm Glass Seal SMD Crystal

### FEATURE

- Typical 8.0 x 4.5 x 1.45 mm full ceramic SMD package.
- 16 mm width Tape & Reel package for automatic assembly.

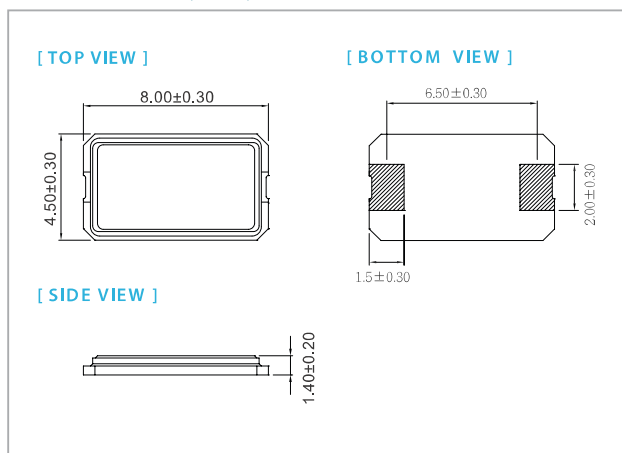
### TYPICAL APPLICATION

- Automotive
- Notebook, Computer Peripherals, Hard Disk
- Office Automation
- Audio & Video

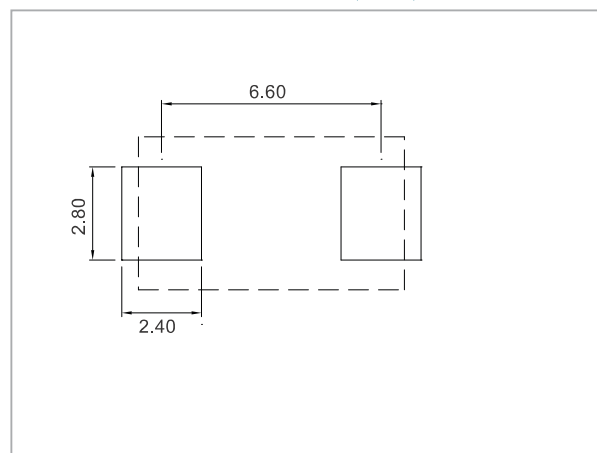


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

| Parameter              | Min.            | Typical | Max. | Unit       |
|------------------------|-----------------|---------|------|------------|
| Storage Temp. Range    | -55             | -       | 125  | °C         |
| Level of Drive         | -               | 10      | 300  | µw         |
| Shunt Capacitance (Co) | -               | -       | 7.0  | pF         |
| Insulation Resistance  | 500 MΩ @ DC100V | -       | -    |            |
| Aging                  |                 | ±5.0    |      | ppm / year |

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

### EQUIVALENT SERIES RESISTANCE (E.S.R)

| Frequency Range          | MODE | E.S.R |
|--------------------------|------|-------|
| 7.3728 MHz ≤ Fo < 11 MHz | A1   | <110Ω |
| 11 MHz ≤ Fo < 14.1 MHz   | A1   | < 50Ω |
| 14.1 MHz ≤ Fo < 18 MHz   | A1   | < 45Ω |
| 18 MHz ≤ Fo < 20 MHz     | A1   | < 30Ω |
| 20 MHz ≤ Fo < 32 MHz     | A1   | < 25Ω |
| 32 MHz ≤ Fo < 48 MHz     | A3   | <110Ω |
| 48 MHz ≤ Fo ≤ 70 MHz     | A3   | <100Ω |

### FREQ. STABILITY vs. TEMP. RANGE

| Temp.(°C) | ppm |     |     |     |
|-----------|-----|-----|-----|-----|
|           | ±5  | ±10 | ±15 | ±30 |
| -10 ~ +60 | △   | ○   | ○   | ○   |
| -20 ~ +70 | X   | △   | ○   | ○   |
| -40 ~ +85 | X   | X   | ○   | ○   |

\* ○: Available △:Conditional X: Not available

### FREQ. STABILITY vs. WIDE TEMP. RANGE

| Temp.(°C)  | ppm |     |     |     |
|------------|-----|-----|-----|-----|
|            | ±15 | ±20 | ±30 | ±50 |
| -40 ~ +105 | △   | ○   | ○   | ○   |
| -40 ~ +125 | X   | X   | △   | ○   |

\* ○: Available △:Conditional X: Not available

Note: not all combination of options are available. Other specifications may be available upon request.