

# **Quartz Crystal Ceramic SMD**



8.0 x 4.5mm Ceramic SMD

#### **Product Features**

- Rugged AT-cut crystal construction
- Compact SMD package
- Available on tape & reel; 16mm tape, 1000 units per reel
- RoHS compliant

## **Product Description**

The 2-pad F8 Series glass seal devices incorporate a sub-miniature AT-cut strip crystal resonator housed in a 8.0 x 4.5mm ceramic package. These compact crystals are ideal for surface mounting in densely-populated PCB applications.

## **Applications**

Ideally suited for disc drives, PCMCIA, PCs and hand-held products.

## **Frequency Range:**

- •6.0000 MHz to 48.0000 MHz (Fundamental)
- •30.0000 MHz to 125.0000 MHz (3rd Overtone)

#### Characteristics at 25°C ±2°C:

- Frequency Calibration Tolerance: ±10ppm, ±20ppm, or ±30ppm
- •Load Capacitance: 8 to 32pF or Series Resonance
- Effective Series Resistance (ESR):

Fundamental: 20 to  $110\Omega$  max depending on frequency 3rd Overtone: 50 to  $80\Omega$  max depending on frequency

- Drive Level:  $10\mu W$  typ.  $(500\mu W \text{ max})$
- •Shunt Capacitance: 7pF max

#### **Temperature Range:**

- $\bullet$  Operating: -20 to +70 °C or -40 to +85 °C
- •Storage: -40 to  $+85^{\circ}$ C

#### **Temperature Stability:**

- $\pm 10$ ppm,  $\pm 20$ ppm,  $\pm 30$ ppm, or  $\pm 50$ ppm (-20 to +70°C)
- $\pm 30$ ppm, or  $\pm 50$ ppm (-40 to +85°C)

#### Aging at 25°C, First Year:

• ±3ppm Max

#### **Reflow Temperature:**

•260°C Max, 10 seconds Max

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Enabling Serial Connectivity

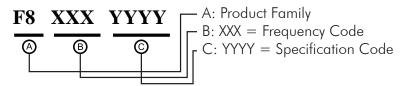
## **Mechanical:**

- •Shock: ±5ppm max after 3 drops from 75cm onto a hard wooden board
- •Solderability: JESD22-B102-D Method 2 (Preconditioning E)
- •Vibration: ±5ppm max sine vibration 10~55Hz, sweep period 1-2 minutes, amplitude 1.5mm, 3 mutually perpendicular planes each 1 hour
- •Solvent Resistance: MIL-STD-202, Method 215
- Resistance to Soldering Heat: J-STD-020C Table 5-2 Pb-free devices (3 cycles max)

#### **Environmental:**

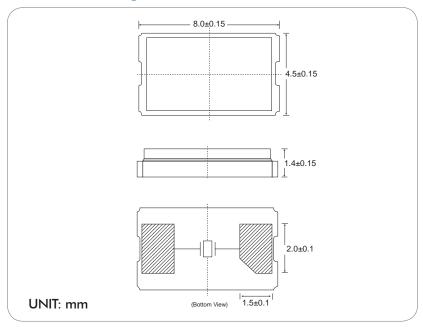
- Gross Test Leak: MIL-STD-883, Method 1014, Condition C
- Fine Test Leak: MIL-STD-883, Method 1014, Condition A2
- •Thermal Shock: MIL-STD-883, Method 1011, Condition A
- Moisture Resistance: MIL-STD-883, Method 1004

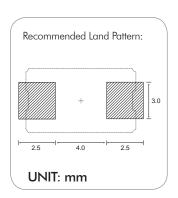
## **Part Ordering Information:**



Following the above format, Saronix-eCera part numbers will be assigned upon confirmation of exact customer requirements

## **Mechanical Drawings:**





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