



# XL-1A and XL-1C Crystal Resonators



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### Description:

The Connor-Winfield XL-1A and XL-1C crystal resonators are a series of fundamental and overtone AT-cut crystals for use in many crystal applications. They are available in a 7.62x5.08mm hermetic ceramic package.

### Features:

- Fundamental or Overtone AT-cut Crystal
- Frequency Calibration  $\pm 50\text{ppm}$
- Temperature Stability  $\pm 50\text{ppm}$
- Surface Mount Package
- Tape and Reel Packaging
- RoHS Compliant / Lead Free 

### Absolute Maximum Ratings

| Parameter           | Minimum | Nominal | Maximum | Units              | Notes |
|---------------------|---------|---------|---------|--------------------|-------|
| Storage Temperature | -55     | -       | 125     | $^{\circ}\text{C}$ |       |

\*\* Not all frequencies are available at Digi-Key

### Electrical Specifications

| Parameter                    | Minimum         | Nominal | Maximum | Units              | Notes                      |
|------------------------------|-----------------|---------|---------|--------------------|----------------------------|
| Frequency Range              | 8               | -       | 100     | MHz                |                            |
| Frequency Tolerance          | -50             | -       | 50      | ppm                | @ 25 $^{\circ}\text{C}$    |
| Temperature Stability        | -50             | -       | 50      | ppm                |                            |
| Operating Temperature Range  | -10             | -       | 60      | $^{\circ}\text{C}$ |                            |
| Shunt Capacitance            | -               | -       | 7       | pF                 |                            |
| Equivalent Series Resistance | See table below |         |         |                    |                            |
| Load Capacitance             | See table below |         |         |                    |                            |
| Drive Level                  | 0.1             |         |         | mW                 | Typical                    |
| Shock Resistance             |                 |         |         | $\pm 5$            | ppm                        |
| Vibration Resistance         |                 |         |         | $\pm 5$            | ppm                        |
| Insulation Resistance        | 500             | -       | -       | M Ohm              | @100Vdc $\pm 15\text{Vdc}$ |

Notes:

- 1) Shock Test Standard: 3 times from 75cm height onto a hard wooden board.  
2) Vibration Test Standard: 10 to 500Hz, Amplitude: 1.5mm or 10G, whichever is smaller.

### Package Outline

| Package      | Description                                          |
|--------------|------------------------------------------------------|
| Model XL-1A: | 2-Pad configuration (see page 2 for package details) |
| Model XL-1C: | 4-Pad configuration (see page 2 for package details) |

### Frequency Range Table

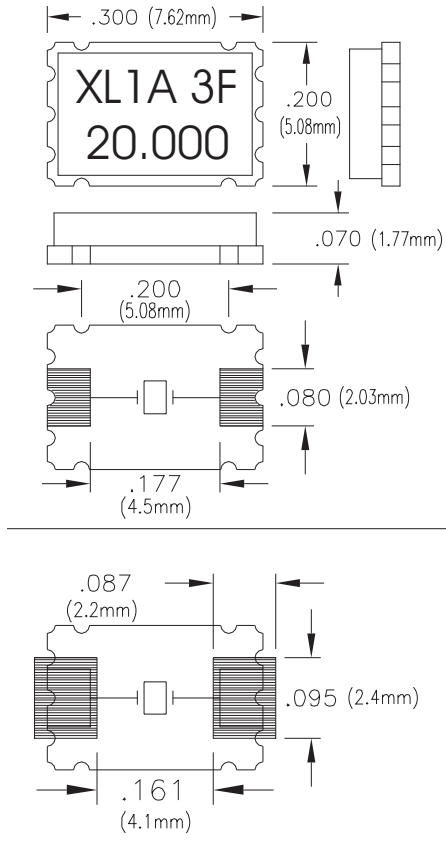
| Frequency range         | Mode of Oscillation | E.S.R.     | CL     |
|-------------------------|---------------------|------------|--------|
| 8.000MHz to 9.999MHz    | Fundamental         | 80 ohm Max | 16pF   |
| 10.000MHz to 15.999MHz  | Fundamental         | 60 ohm Max | 16pF   |
| 16.000MHz to 50.000MHz  | Fundamental         | 40 ohm Max | 16pF   |
| 28.000MHz to 84.000MHz  | 3rd Overtone        | 60 ohm Max | Series |
| 84.001MHz to 100.000MHz | 5th Overtone        | 80 ohm Max | Series |

### Ordering Information Examples

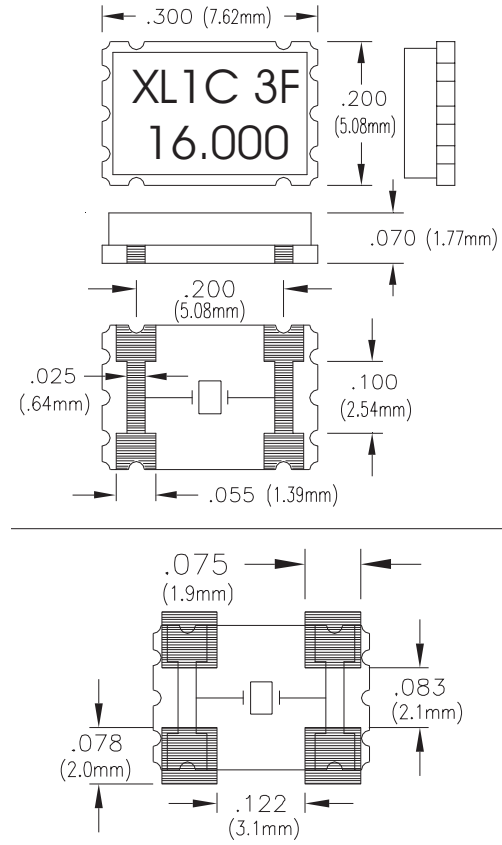
|                |
|----------------|
| XL-1C-010.0M   |
| XL-1A-012.288M |



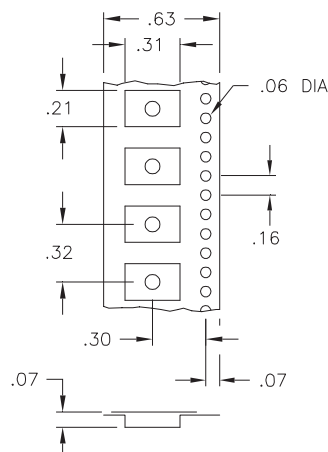
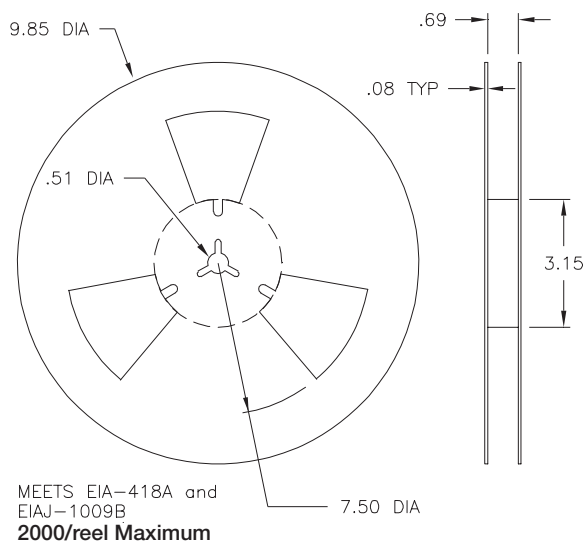
## Package Outline: XL-1A



## Package Outline: XL-1C



## Tape and Reel



## Solder Profile

