

### FEATURES

- **Miniature package: 4.0 x 2.5 x 0.6mm**
- **Gold-plated ceramic base with metal seam-welded package**
- **Very low ageing**
- **Designed for hand-held equipment, PDAs, Blue Tooth, GPS**
- **High shock and vibration resistance**



### DESCRIPTION

X42 crystals are micro-miniature surface-mount mount crystals. The crystals have a gold plated ceramic base with a seam welded metal lid providing a stable crystal with very low ageing. The rugged construction ensures that this crystal has high shock and vibration resistance. The crystal has been specifically designed for use in small hand-held communication equipment such as PDAs, GPS and Bluetooth.

### SPECIFICATION

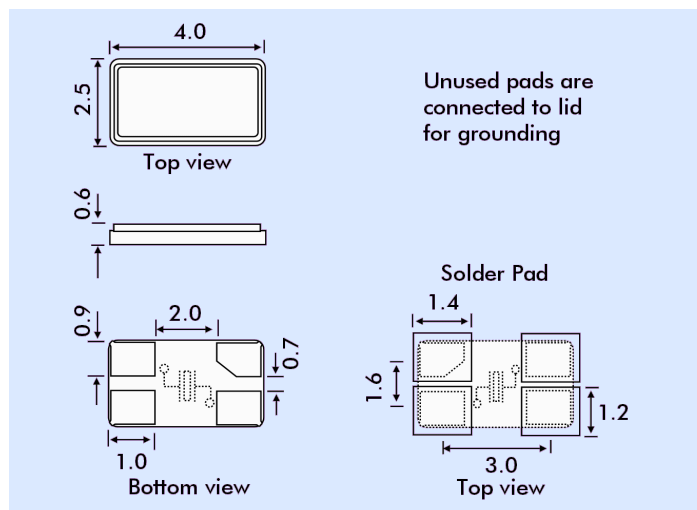
|                                 |  |
|---------------------------------|--|
| Frequency Range:                | 10.0MHz to 60.0MHz                                     |
| Operating Mode:                 | AT-Cut Fundamental:                                    |
| Calibration Tolerance at 25°C*: | from ±5ppm<br>(±10, ±20 or ±30ppm standard)            |
| Frequency stability*            |  |
| -10° to +60°C                   | from ±5ppm   |
| -20° to +70°C                   | from ±10ppm  |
| -30° to +85°C                   | from ±10ppm  |
| Storage Temperature:            | -50°~+105°C  |
| Equivalent Series Resistance:   | See table  |
| Shunt Capacitance (C0):         | 2pF to 4pF typical, 5pF maximum                        |
| Load Capacitance (CL):          | Series or from 10pF to 32pF<br>(Customer specified CL) |
| Ageing:                         | <±3ppm per year at +25°C                               |
| Drive level:                    | 100 μW maximum   |
| Reflow Soldering:               | 10s maximum at 260°C twice<br>or 180s at 230°C, once.  |
| Packaging:                      | 12mm EIA tape and reel                                 |

\*Note: Tighter stability, tolerance and lower ESR values are available.

### EQUIVALENT SERIES RESISTANCE (ESR)

| Frequency Range MHz | Crystal Cut/ Mode | ESR Ω Max. |
|---------------------|-------------------|------------|
| 12.0 ~ 20.0         | AT Fund.          | 80         |
| 20.1 ~ 60.0         | AT Fund.          | 60         |

### OUTLINE & DIMENSIONS



### PART NUMBER GENERATION

Part numbers for X42 crystals are generated as follows:

