

## Features

- 3225 size ultra miniature and lightweight SMD crystal units with low profile of 0.8mm
- Frequency range from 8MHz to 64MHz
- High precision and high frequency stability
- Automatic mounting and reflow soldering
- Applications: *Wireless Communications, PC, DSC, PDA, Wearables, etc.*
- Contains Pb in sealed glass exempted by RoHS directive



## Standard Specifications

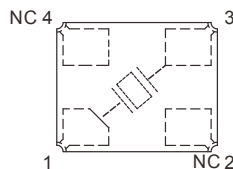
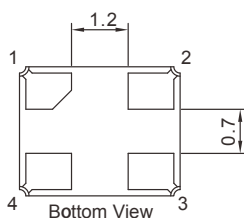
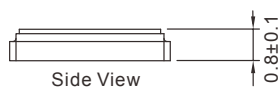
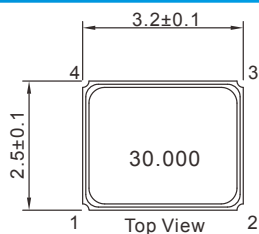
| Type                                       | 7V Glass SMD Crystal                    |
|--|---|
| Frequency Range                            | 8~64 MHz                                |
| Frequency Tolerance (at 25°C)              | $\pm 10\text{ppm}$ , $\pm 20\text{ppm}$ |
| Frequency Stability (over Operating Temp.) | $\pm 10\text{ppm}$ , $\pm 20\text{ppm}$ |
| Operating Temperature Range                | -20~+70°C, -40~+85°C                    |
| Shunt Capacitance ( $C_0$ )                | 5pF Max.                                |
| Drive Level                                | 1~50 $\mu$ W (10 $\mu$ W Typ.)          |
| Load Capacitance                           | 8pF, 10pF, or specify                   |
| Aging (at 25°C)                            | $\pm 3\text{ppm}$ / year Max.           |
| Storage Temperature Range                  | -40~+85°C                               |
| Packing Unit                               | 3000pcs./Reel                           |

## Equivalent Series Resistance

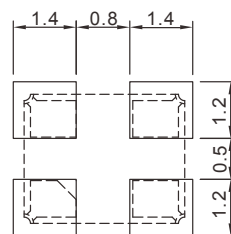
### Fundamental

|           |                   |           |                  |
|-----------|-------------------|-----------|------------------|
| 8~10 MHz  | 400 $\Omega$ Max. | 20~27 MHz | 60 $\Omega$ Max. |
| 10~12 MHz | 100 $\Omega$ Max. | 27~64 MHz | 50 $\Omega$ Max. |
| 12~20 MHz | 80 $\Omega$ Max.  |           |                  |

## Dimensions [mm]



Top View Crystal Connection



Top View Suggested Layout