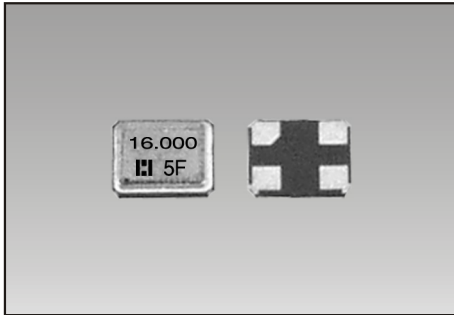




## • HCX-3SB Series 3.2X2.5X0.65 mm



### FEATURES

- Compact and thin (3.2X2.5X0.65 mm typ.)
- Frequency range of 13M to 54M with Fund
- Suitable application include telecommunications equipment, Short-range radio link modules,DVC,DSC PDA and PC.
- Excellent heat resistance and shock resistance.
- Products that are lead-free. These can meet the requirement of re-flow profiling using lead-free solder

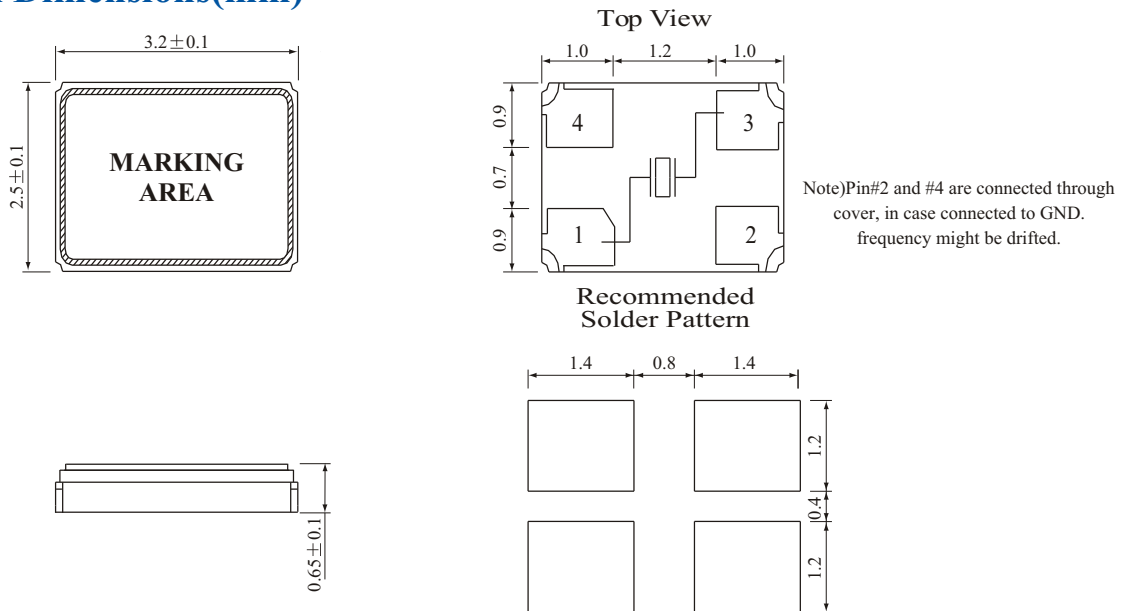
## Electrical Specifications

| Parameter                   | Symb               | Condition          | Min  | Typ | Max  | Units |
|-----------------------------|--------------------|--------------------|------|-----|------|-------|
| Frequency Range             | F <sub>0</sub>     |                    | 13   |     | 54   | MHz   |
| Frequency Tolerance         | ΔF/ F <sub>0</sub> | AT 25°C            | ±10  | ±15 | ±30  | ppm   |
| Temperature Stability       | T <sub>c</sub>     | REF TO 25°C        | ±10  | ±15 | ±30  | ppm   |
| Operating Temperature Range | T <sub>OPR</sub>   |                    | -20  |     | +70  | °C    |
| Storage Temperature Range   | T <sub>STG</sub>   |                    | -40  |     | +85  | °C    |
| Shunt Capacitance           | C <sub>0</sub>     |                    |      |     | 3    | pF    |
| Load Capacitance            | C <sub>L</sub>     |                    | 8    |     | 12   | pF    |
| Insulator Resistance        | I <sub>R</sub>     | 100V <sub>DC</sub> | 500  |     |      | MΩ    |
| Drive Level                 | D <sub>L</sub>     |                    | 10   | 100 | 300  | W     |
| Aging(at 25°C)              | F <sub>a</sub>     | AT 25°C,per year   | -2.0 |     | +2.0 | ppm   |

## Equivalent Series Resistance(ESR) and Mode of Vibration(Mode)

| Frequency Range        | Max ESR(Ω) | Mode        |
|------------------------|------------|-------------|
| 13.000MHz to 19.999MHz | 80         | Fundamental |
| 20.000MHz to 25.999MHz | 70         | Fundamental |
| 26.000MHz to 54.000MHz | 50         | Fundamental |

## Mechanical Dimensions(mm)



SMD Crystal Units

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Specifications are subject to change without notice