



■ Features

- 11 x 4.5 x 3.3 (2.3) ±0.3 mm. of surface mounted quartz crystal units.
- Excellent reliability characteristics such as heat and mechanical shock.
- Pb-free and satisfy RoHs requirements.
- Reflow soldering is available.

■ Applications

Digital Electronics, Consumer Products
Bluetooth, Wireless LAN and Automotive

■ Specifications

| | |
|---|---------------------------------|
| Frequency range | 3.579~85 MHz |
| Overtone Order | Fundamental or 3RD |
| Frequency tolerance at 25°C | ±10, ±15, ±20, ±30, ±50 ppm |
| Operating temperature range and frequency stability | See Table 1 |
| Equivalent series resistance | See Table 2 |
| Shunt capacitance | 5 pF Max or specify |
| Load capacitance | 5~39 pF or specify |
| Drive level (Max.) | 1~1000 μW or specify |
| Insulation resistance | 500MΩ Min. at DC 100V |
| Aging at 25°C | ±3 ppm / year Max |
| Storage temperature range | -40 ~ +85 °C or -40 ~ +125 °C |
| Measure instrument | S&A 250B system with PI circuit |

■ Table 1

Operating temperature range and frequency stability

| Temp | ppm | | | | |
|---------------|-----|-----|-----|-----|------|
| | ±10 | ±15 | ±20 | ±30 | ±100 |
| 0~+ 50 °C | ● | ● | ● | ● | ● |
| - 10~+ 60 °C | ● | ● | ● | ● | ● |
| - 20~+ 70 °C | | ● | ● | ● | ● |
| - 30~+ 85 °C | | | ● | ● | ● |
| - 40~+ 85 °C | | | | ● | ● |
| - 40~+ 125 °C | | | | | ● |

■ Table 2

Equivalent series resistance

| Frequency (MHz) | Overtone Order | ESR (Ω MAX) |
|-----------------|----------------|-------------|
| 3.579~6 | Fundamental | 120 |
| 6~8 | Fundamental | 60 |
| 8~12 | Fundamental | 40 |
| 12~20 | Fundamental | 30 |
| 20~40 | Fundamental | 20 |
| 40~85 | Fundamental | 40 |

The mark“●”denotes our achieved level

■ Dimensions & Land pattern (unit: mm)

