



■ 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)

