



Features

- > Ultra small SMD type crystal units.
- > High precision characteristic covering up to wide frequency range.
- > Higher frequency stability and reliability.
- > Excellent for reducing EMI effect.
- > The best choice of Bluetooth, wireless communication set, mobile phone, DSC, PDA, and USB interface card.
- > RoHS Compliant / Pb Free.

Electrical Specifications

Frequency Range	10.000 ~ 80 MHz
Load Capacitance	Series, 6~32 pF, or specify
Frequency Tolerance (at 25 °C)	±10, ±30 ppm, or specify
Frequency Stability Over Operating Temperature Range	±10, ±30 ppm, or specify
Operating Temperature Range	-20 ~ +70 °C, or specify
Storage Temperature Range	-40 ~ +85 °C
Shunt Capacitance (C0)	7 pF Max.
Drive Level	1 ~ 1000 µW (100 µW typical)
Insulation Resistance	500 MΩ Minimum at 100VDC
Aging (at 25°C)	±3 ppm / year Max.

Equivalent Series Resistance(ESR)

Frequency Range (MHz)	Mode	ESRΩ(MAX)
10.000~11.999	FOUN	60
12.000~15.999	FOUN	55
16.000~23.999	FOUN	50
24.000~54.000	FOUN	40
40.000~80.000	3rd	80

Frequency Stability Over Operating Temperature Range

Temperature Range	Frequency Stability (ppm)			
	±10	±15	±20	±30
0 ~ +50°C	*	*	*	*
-10 ~ +60°C	*	*	*	*
-20 ~ +70°C	*	*	*	*
-30 ~ +80°C		*	*	*
-40 ~ +85°C			*	*

Dimensions

