# Quartz Crystals



## SMD HC-49S 9C SERIES



## **Features**

- > Surface mount type crystal units.
- > A great number of standard frequencies.
- > High frequency pullability and low equivalent series resistance.
- > Highly mass production capability.
- > The best choice of PC, STB, LCDM, and Cable Modem.
- > RoHS Compliant / Pb Free.

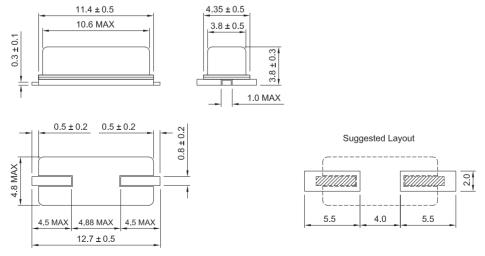
## **Electrical Specifications**

Item / Type	9C		
Frequency Range	3.2 ~ 90 MHz		
Frequency Tolerance (at 25 °C)	± 30 ppm, or specify		
Frequency Stability Over Operating Temperature Range	$\pm$ 30 ppm (-20 $\sim$ +70 °C), or specify		
Operating Temperature Range	- 40 ~ + 85 °C		
Shunt Capacitance (C0)	7 pF Max.		
Drive Level	1 ~ 500 μW (100 μW typical)		
Load Capacitance	18 pF, or specify		
Aging (at 25 °C)	± 3 ppm / year Max.		
Storage Temperature Range	- 55 ~ + 125 °C		

#### **Equivalent Series Resistance(ESR)**

Fundamental		3rd Overtone	
3.2 ~ 3.686 MHz	200 Ω Max.	27 ~ 30 MHz	100 Ω Max.
3.686 ~ 5 MHz	150 Ω Max.	30 ~ 50 MHz	80 Ω Max.
5 ~ 10 MHz	80 Ω Max	50 ~ 90 MHz	60 Ω Max.
10 ~ 14 MHz	40 Ω Max.		
14 ~ 30 MHz	30 Ω Max.		

#### **Dimensions**



Units:mm