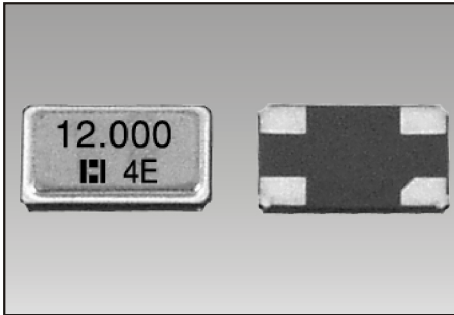




# SURFACE MOUNT CRYSTAL

## • HCX-6SB/6SA Series 6.0X3.5X1.0 mm



The 6SB/6SA crystal is an ultra miniature package with size of 6.0 × 3.5 × 1.0mm. With its ceramic Base and metal cover it provides the durability and reliability necessary for strenuous process like infrared and vapor phase reflow.

### FEATURES

- Ultra-miniature size
- Fundamental till 40MHz
- Wide Frequency Range
- Seam sealing
- Ceramic package
- Emboss taping
- Reflow soldering

### Electrical Specifications

Parameter	Symb	Condition	Min	Typ	Max	Units
Frequency Range	F <sub>0</sub>		10.000		80.000	MHz
Frequency Tolerance	ΔF/ F <sub>0</sub>	AT 25 °C	± 10	± 30	± 50	ppm
Temperature Stability	T <sub>C</sub>	REF TO 25°C	± 10	± 30	± 50	ppm
Operating Temperature Range	T <sub>OPR</sub>		-10*		+60*	°C
Storage Temperature Range	T <sub>STG</sub>		-40		+85	°C
Shunt Capacitance	C <sub>0</sub>				7	pF
Load Capacitance	C <sub>L</sub>	Customer specified	10		Series	pF
Insulator Resistance	I <sub>R</sub>	100V <sub>DC</sub>	500			MΩ
Drive Level	D <sub>L</sub>			10	100	W
Aging	F <sub>a</sub>	AT 25°C, per year	-5.0		+5.0	ppm

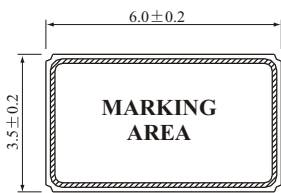
\*Operating temperature range: -20°C to +70°C option

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

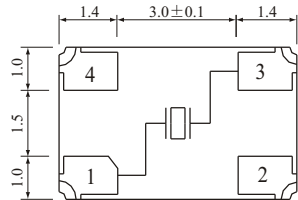
Frequency Range	Max ESR(Ω)	Mode
10.000MHz to 10.999MHz	100	Fundamental
11.000MHz to 11.999MHz	80	Fundamental
12.000MHz to 15.999MHz	60	Fundamental
16.000MHz to 39.999MHz	40	Fundamental
40.000MHz to 80.000MHz	70	3 <sup>rd</sup> Overtone

### Mechanical Dimensions(mm)

#### 6SB

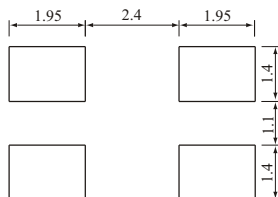


#### Top View

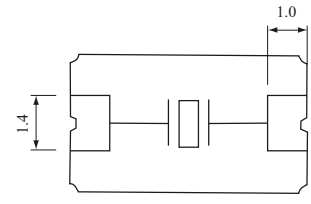
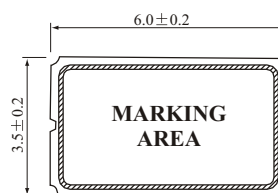


Note)Pin#2 and #4 are connected through cover, in case connected to GND, frequency might be drifted.

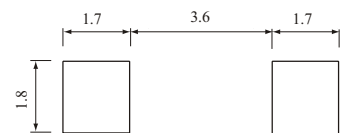
#### Recommended Solder Pattern



#### 6SA



#### Recommended Solder Pattern



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Specifications are subject to change without notice