



**Pb Free**

**RoHS Compliant**

**Features**

- Crystal unit for automotive electronics
- Metal package, leaded type
- A resistance weld hermetic sealed type
- Suitable for high density assembly and mass production

**Applications**

- Engine Control

**How to Order**

CXH49SFA 06000 H0 Q S W ZZ  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Code
- ② Typical Frequencies

Code	Freq.(kHz)	Code	Freq.(kHz)
04000	4000.000	12000	12000.000
05000	5000.000	16000	16000.000
06000	6000.000	18000	18000.000
08000	8000.000	20000	20000.000
10000	10000.000		

\*Please inquire about frequencies other than the above.

- ③ Load Capacitance

<b>H0</b>	12pF
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- ④ Frequency Stability

<b>Q</b>	$\pm 100 \times 10^{-6}$
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- ⑤ Operating Temperature Range

<b>S</b>	-40°C to +125°C
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- ⑥ Frequency Temperature Stability

<b>W</b>	$\pm 200 \times 10^{-6}$
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- ⑦ Special

<b>ZZ</b>	Custom Specification
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**Specifications**

Items	Symbol	Specification	Units	Remarks
Frequency Range	f <sub>nom</sub>	3200 to 20000	kHz	
Overtone Order	OT	Fundamental	—	
Frequency Tolerance	f <sub>tol</sub>	$\pm 100$	$\times 10^{-6}$	@ 25°C
Frequency Temp. Characteristics	f <sub>tem</sub>	$\pm 200$	$\times 10^{-6}$	ref.@ 25°C Over Operating Temp. Range
Motional Series Resistance	R1	Table 1	ohm	
Level of Drive	DL	Table 2	$\mu W$	
Load Capacitance	CL	12	pF	
Operating Temp. Range	T <sub>use</sub>	-40 to +125	°C	
Storage Temp. Range	T <sub>stg</sub>	-40 to +125	°C	

\* Please inquire about specifications other than the above.

**Table1 Motional Series Resistances**

Frequency Range	Motional Series Resistance	Units
3200 to 3499kHz	300	ohm
3500 to 4099kHz	150	
4100 to 4799kHz	120	
4800 to 5999kHz	100	
6000 to 11999kHz	90	
12000 to 13499kHz	70	
13500 to 20000kHz	50	

**Table2 Level of Drive**

Frequency Range	Level of Drive	Units
3200 to 15999kHz	10 (500 max.)	$\mu W$
16000 to 20000kHz	10 (300 max.)	

**Dimensions**

(Unit : mm)

