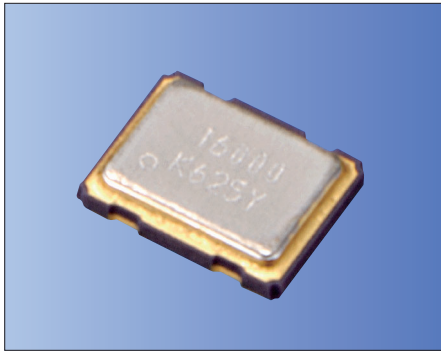




3.2×2.5mm for Automotive



AEC-Q200 RoHS Compliant

### Features

- Crystal unit for automotive electronics
- Improved solderability
- Improved mounting stability with 4 terminals
- Improved anti-noise performance with GND terminal
- Ceramic package
- Small and low profile
- Improved rust prevention performance
- Reflow compatible
- Highly reliable solder junction (3000 heat cycles -40 to +125°C)

### Applications

- ECU
- TPMS
- High-Speed Automotive Network

### How to Order

CX3225SA 12000 D0 P T V CC  
① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Frequency
- ③ Load Capacitance
- ④ Frequency Tolerance
- ⑤ Operating Temp. Range
- ⑥ Frequency Temp. Stability
- ⑦ Individual Specification (STD Standard is "CC")

Packaging (Tape & Reel 3000 pcs./ reel)

### Specifications

Item	Symbol	Specification	Unit	Remarks
Frequency Range	f <sub>nom</sub>	8000 to 54000	kHz	
Overtone Order	OT	Fundamental	—	
Load Capacitance	CL	8	pF	Please contact us for other CL requirements.
Frequency Tolerance	f <sub>tol</sub>	±15	×10 <sup>-6</sup>	25°C±3°C
Motional Series Resistance	R1	Table 1	ohm	
Drive Level	DL	Table 2	μW	
Operating Temp. Range	T <sub>use</sub>	-40 to +150	°C	
Storage Temp. Range	T <sub>stg</sub>	-40 to +150	°C	
Frequency Temp. Characteristics	f <sub>tem</sub>	±150	×10 <sup>-6</sup>	Freq. deviation from the value at 25°C

Please contact us for other specifications.

Table 1 Motional Series Resistance

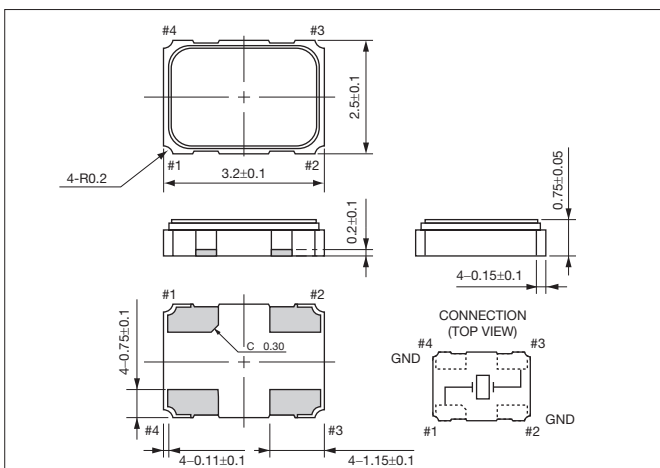
Frequency Range	Motional Series Resistance
8000 ≤ f <sub>nom</sub> < 9800kHz	500 Ω max.
9800 ≤ f <sub>nom</sub> < 13560kHz	200 Ω max.
13560 ≤ f <sub>nom</sub> < 16000kHz	100 Ω max.
16000 ≤ f <sub>nom</sub> < 20000kHz	60 Ω max.
20000 ≤ f <sub>nom</sub> ≤ 54000kHz	50 Ω max.

Table 2 Level of Drive

Frequency Range	Level of Drive
8000 ≤ f <sub>nom</sub> ≤ 54000kHz	10μW (200μW max.)

### Dimensions

(Unit: mm)



### Recommended Land Pattern

(Unit: mm)

