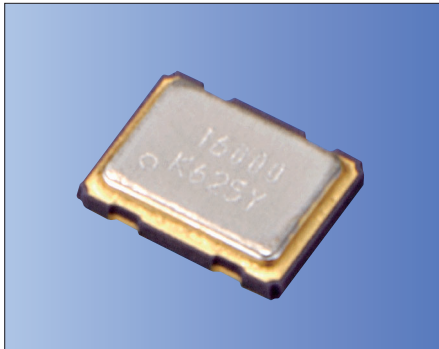




3.2×2.5mm for Automotive



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

①Series

②Frequency

③Load Capacitance

④Frequency Tolerance

D0 8 pF P $\pm 50 \times 10^{-6}$

⑤Operating Temp. Range ⑥Frequency Temp. Stability

TV -40 to +150°C $\pm 150 \times 10^{-6}$

⑦Individual Specification
(STD Standard is "CC")

Packaging (Tape & Reel 3000 pcs./ reel)

Specifications

Item	Symbol	Specification	Unit	Remarks
Frequency Range	f_{nom}	8000 to 54000	kHz	
Overtone Order	OT	Fundamental	—	
Load Capacitance	CL	8	pF	Please contact us for other CL requirements.
Frequency Tolerance	f_{tol}	± 15	$\times 10^{-6}$	25°C $\pm 3^\circ\text{C}$
Motional Series Resistance	R1	Table 1	ohm	
Drive Level	DL	Table 2	μW	
Operating Temp. Range	T_{use}	-40 to +150	°C	
Storage Temp. Range	T_{stg}	-40 to +150	°C	
Frequency Temp. Characteristics	f_{tem}	± 150	$\times 10^{-6}$	Freq. deviation from the value at 25°C

Please contact us for other specifications.

Table 1 Motional Series Resistance

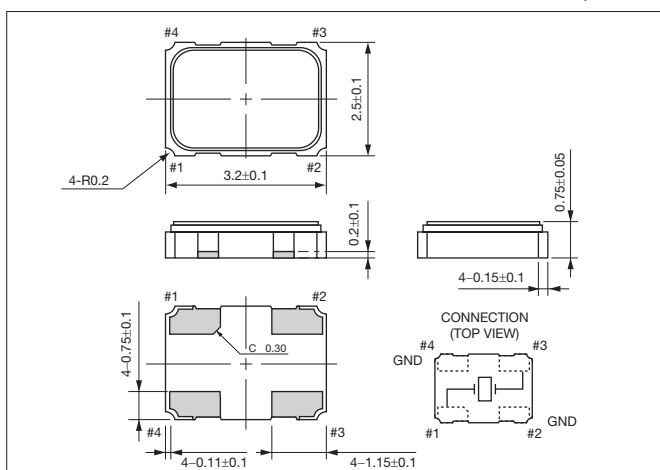
Frequency Range	Motional Series Resistance
$8000 \leq f_{nom} < 9800\text{kHz}$	500 Ω max.
$9800 \leq f_{nom} < 13560\text{kHz}$	200 Ω max.
$13560 \leq f_{nom} < 16000\text{kHz}$	100 Ω max.
$16000 \leq f_{nom} < 20000\text{kHz}$	60 Ω max.
$20000 \leq f_{nom} \leq 54000\text{kHz}$	50 Ω max.

Table 2 Level of Drive

Frequency Range	Level of Drive
$8000 \leq f_{nom} \leq 54000\text{kHz}$	10 μW (200 μW max.)

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

