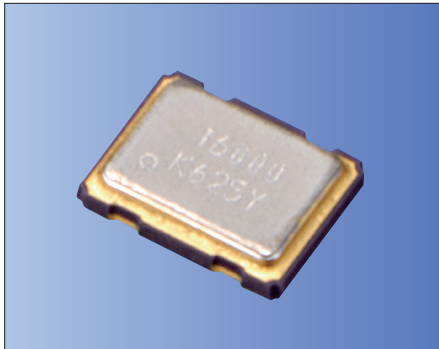




3.2×2.5mm for Automotive



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	$f_{tol}$	$\pm 15$	$\times 10^{-6}$	25°C $\pm 3^\circ\text{C}$
Motional Series Resistance	R1	Table 1	ohm	
Drive Level	DL	Table 2	$\mu\text{W}$	
Operating Temp. Range	$T_{use}$	-40 to +150	°C	
Storage Temp. Range	$T_{stg}$	-40 to +150	°C	
Frequency Temp. Characteristics	$f_{tem}$	$\pm 150$	$\times 10^{-6}$	Freq. deviation from the value at 25°C

Please contact us for other specifications.

Table 1 Motional Series Resistance

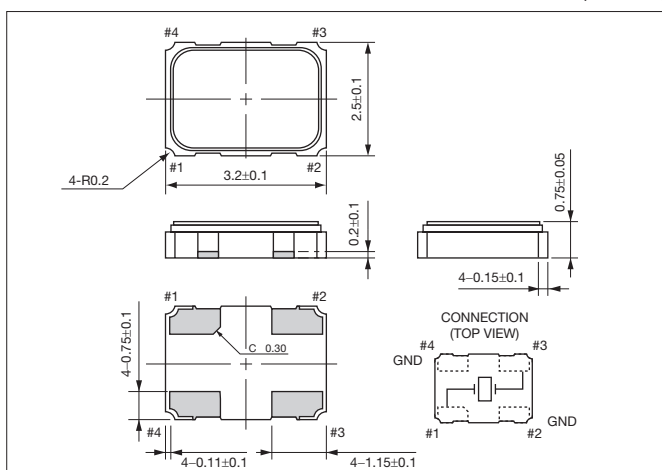
Frequency Range	Motional Series Resistance
$8000 \leq f_{nom} < 9800\text{kHz}$	500 $\Omega$ max.
$9800 \leq f_{nom} < 13560\text{kHz}$	200 $\Omega$ max.
$13560 \leq f_{nom} < 16000\text{kHz}$	100 $\Omega$ max.
$16000 \leq f_{nom} < 20000\text{kHz}$	60 $\Omega$ max.
$20000 \leq f_{nom} \leq 54000\text{kHz}$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

Table 2 Level of Drive

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

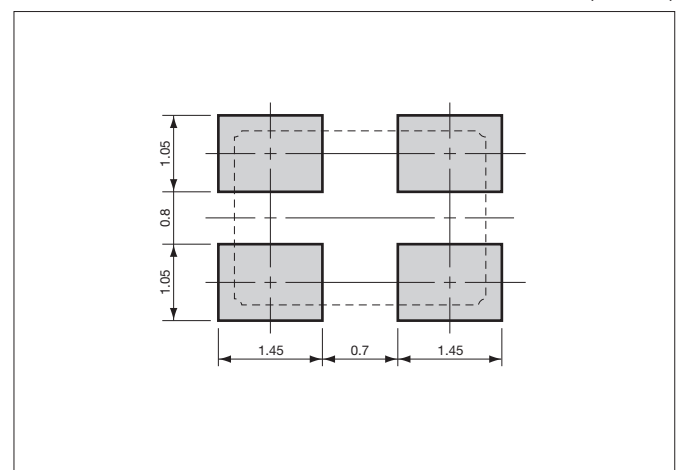
### Dimensions

(Unit: mm)



### Recommended Land Pattern

(Unit: mm)



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Kyocera:

[CX3225SA27000D0PZZ06](#) [CX3225SA16000D0PSTZ1](#) [CX3225SA25000H0GSSC1](#) [CX3225SA18080H0FSST1](#)  
[CX3225SA40000D0PTWCC](#) [CX3225SA08192D0PTVL1](#)