# Surface Mount Type CX3225SA







#### 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

| <u>CX3225SA</u>                                   | 12000<br>②                         | <u>D0</u><br>③ | <u>G</u>              | <u>T</u> | <u>V</u><br>6 | <u> </u> |  |
|---|------------------------------------|----------------|-----------------------|----------|---------------|----------|--|
| ①Series<br>③Load Capacit                          | ②Frequency<br>④Frequency Tolerance |                |                       |          |               |          |  |
| D0 8 p  | F                                  | G              | ±15×10 <sup>-6</sup>  |          |               | -6       |  |
| ©Operating Temp. Range ©Frequency Temp. Stability |                                    |                |                       |          |               |          |  |
| TV -40 to +150°C                                  |                                    |                | ±150×10 <sup>-6</sup> |          |               |          |  |
| 0   |                                    |                |                       |          |               |          |  |

**OIndividual Specification** 

Packaging (Tape & Reel 3000 pcs./ reel)

### **Specifications**

| Item                            | Symbol | Specification                         | Unit              | Remarks                                      |
|---------------------------------|--------|---------------------------------------|-------------------|--|
| Frequency Range                 | f_nom  | 8, 10, 12, 15, 16, 20, 24, 26, 27, 40 | MHz               | Please contact us for other frequency range. |
| Overtone Order                  | ОТ     | Fundamental                           | _                 |  |
| Load Capacitance                | CL     | 8                                     | рF                | Please contact us for other CL requirements. |
| Frequency Tolerance             | f_tol  | ±15                                   | ×10 <sup>-6</sup> | 25°C±3°C                                     |
| Motional Series Resistance      | R1     | Table 1                               | ohm               |  |
| Drive Level                     | DL     | 10μW(200μW max.)                      | 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                                  | ×10 <sup>-6</sup> | Freq. deviation from the value at 25°C       |

Please contact us for other specifications.

Table 1 Motional Series Resistance Please contact us for other frequency range.

| Frequency | Motional Series Resistance |  |  |
|-----------|----------------------------|--|--|
| 8MHz      | 500 Ω max.                 |  |  |
| 12MHz     | 200 Ω max.                 |  |  |
| 16MHz     | 60 Ω max.                  |  |  |
| 20MHz     | 50 Ω max.                  |  |  |

# **Dimensions** (Unit: mm) 4-0.15±0.1 CONNECTION (TOP VIEW)

4-1.15±0.1

