



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
- AEC-Q200 certified

Applications

- ECU

How to Order

CX49LFWA 03200 □ □ □ □ □ □ □
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Series ② Frequency
 ③ Load Capacitance ④ Frequency Stability

| | | | | | |
|-----------|-------|------|----------|--------------------------|------|
| DO | 8 pF | — | P | $\pm 50 \times 10^{-6}$ | — |
| HO | 12 pF | Std. | Q | $\pm 100 \times 10^{-6}$ | Std. |

- ⑤ Operating Temp. Range ⑥ Frequency Temp. Stability

| | | | |
|-----------|---------------|--------------------------|------|
| SW | -40 to +125°C | $\pm 200 \times 10^{-6}$ | Std. |
|-----------|---------------|--------------------------|------|

- ⑦ Individual Specification

Specifications

| Item | Symbol | Specification | Units | Remarks |
|---------------------------------|------------------|---------------|------------------|--|
| Frequency Range | f _{nom} | 3200 to 20000 | kHz | |
| Overtone Order | OT | Fundamental | — | |
| Load Capacitance | CL | 12 | pF | |
| Frequency Stability | f _{tol} | ± 100 | $\times 10^{-6}$ | 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 +125 | °C | |
| Storage Temp. Range | T _{stg} | -40 to +125 | °C | |
| Frequency Temp. Characteristics | f _{tem} | ± 200 | $\times 10^{-6}$ | Freq. deviation from the value at 25°C |

* Please contact us for other specifications.

Typical Frequencies and Part Numbers

| Frequency (kHz) | Part Number |
|-----------------|----------------------|
| 4000.000 | CX49LFWA04000HOQSWZ1 |
| 5000.000 | CX49LFWA05000HOQSWZ1 |
| 6000.000 | CX49LFWA06000HOQSWZ1 |
| 8000.000 | CX49LFWA08000HOQSWZ1 |
| 10000.000 | CX49LFWA10000HOQSWZ1 |
| 12000.000 | CX49LFWA12000HOQSWZ1 |
| 16000.000 | CX49LFWA16000HOQSWZ1 |
| 18000.000 | CX49LFWA18000HOQSWZ1 |
| 20000.000 | CX49LFWA20000HOQSWZ1 |

Table1 Motional Series Resistance

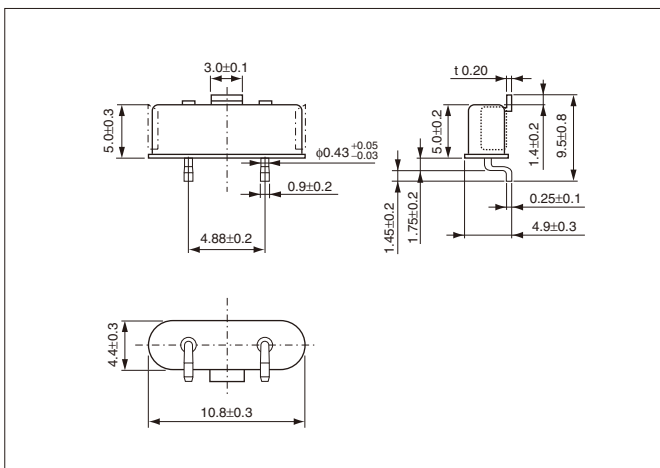
| Frequency Range | Motional Series Resistance |
|-------------------|----------------------------|
| 3200 to 3499kHz | 300Ω max. |
| 3500 to 4099kHz | 150Ω max. |
| 4100 to 4799kHz | 120Ω max. |
| 4800 to 5999kHz | 100Ω max. |
| 6000 to 11999kHz | 90Ω max. |
| 12000 to 13499kHz | 70Ω max. |
| 13500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

Table2 Level of Drive

| Frequency Range | Level of Drive |
|-------------------|-------------------|
| 3200 to 15999kHz | 10μW (500μW max.) |
| 16000 to 20000kHz | 10μW (300μW max.) |

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

