

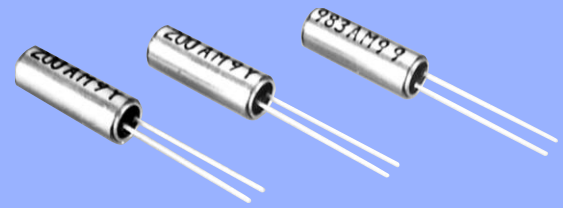
**MHz RANGE CRYSTAL UNIT
CYLINDER**

CA-301

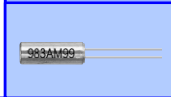
- Frequency range : 4 MHz to 64 MHz
- Thickness : $\phi 3.1$ mm Max.
- Overtone order : Fundamental
3rd overtone (30 MHz to 64 MHz)
- Applications : For Clock of integrated circuit



Product Number (please contact us)
Q21CA3011xxxx00



Actual size



Specifications (characteristics)

| Item | Symbol | Specification | Conditions / Remarks |
|---|------------------|--|--|
| Nominal frequency range | f _{nom} | 4.000 MHz to 29.999 MHz | Fundamental *1 |
| | | 30.000 MHz to 64.000 MHz | 3rd overtone *2 |
| Storage temperature | T _{stg} | -40 °C to +85 °C | Store as bare product. |
| Operating temperature | T _{use} | -20 °C to +70 °C | The operating temperature range is -10 °C to +60 °C for 5.5 MHz and below |
| Level of drive | DL | 10 μ W to 100 μ W | |
| Frequency tolerance (standard) | f _{tol} | $\pm 30 \times 10^{-6}$ (Under 5.5 MHz: $\pm 50 \times 10^{-6}$, $\pm 100 \times 10^{-6}$) | +25 °C |
| Frequency versus temperature characteristics (standard) | f _{tem} | Under 5.5 MHz: $\pm 50 \times 10^{-6}$ | -10 °C to +60 °C |
| | | Over 5.5 MHz: $\pm 30 \times 10^{-6}$ | -20 °C to +70 °C |
| Load capacitance | CL | Fundamental: 10 pF to ∞ . | Please specify |
| | | Overtone: 5 pF to ∞ | |
| Motional resistance (ESR) | R ₁ | As per below table | -20 °C to +70 °C, DL=100 μ W |
| Frequency aging | f _{age} | $\pm 5 \times 10^{-6}$ / year Max. | +25 °C, First year |

*1 4.0 MHz \leq f_{nom} < 5.5 MHz : See "Available frequencies from 4.0 MHz to less than 5.5 MHz". 8.0 MHz < f_{nom} < 8.2 MHz: Unavailable.

*2 26.000 MHz \leq f_{nom} < 30.000 MHz : please contact us for inquiries for 3rd overtone mode.

Available frequencies from 4.0 MHz to less than 5.5 MHz (MHz)

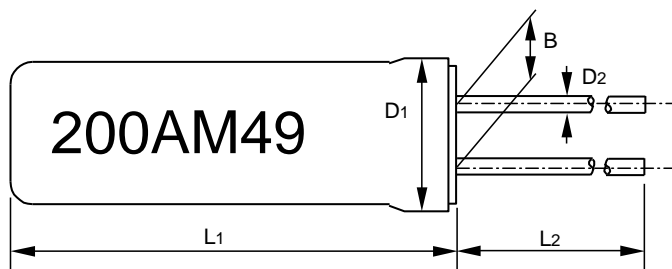
| | | | | | | | | |
|-------|-------|-------|-------|----------|----------|-------|-------|--------|
| 4.000 | 4.032 | 4.096 | 4.190 | 4.194304 | 4.433619 | 4.500 | 4.800 | 4.9152 |
|-------|-------|-------|-------|----------|----------|-------|-------|--------|

Motional resistance (ESR)

| Frequency (MHz) | 4 \leq f _{nom} < 5.5 | 5.5 \leq f _{nom} < 6 | 6 \leq f _{nom} < 10 | 10 \leq f _{nom} < 12 | 12 \leq f _{nom} < 16 | 16 \leq f _{nom} < 30 | 30 \leq f _{nom} \leq 36 | 36 < f _{nom} \leq 64 |
|---------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------------|---------------------------------|
| Motional resistance | 150 Ω Max. | 100 Ω Max. | 80 Ω Max. | 60 Ω Max. | 50 Ω Max. | 40 Ω Max. | 100 Ω Max. | 80 Ω Max. |
| Overtone order | Fundamental | | | | | | 3rd overtone | |

External dimensions

(Unit:mm)



| Frequency | L1 | L2 | D1 | D2 | B |
|---------------|----------|----------|-----------------|------------|-----|
| Under 5.5 MHz | 9.3 Max. | 9.5 Min. | ϕ 3.1 Max. | ϕ 0.3 | 1.1 |
| Over 5.5 MHz | 8.9 Max. | 9.5 Min. | ϕ 3.1 Max. | ϕ 0.3 | 1.1 |