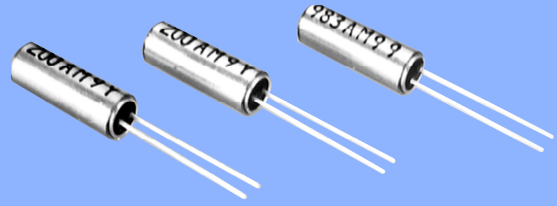


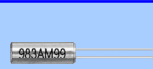
MHz RANGE CRYSTAL UNIT CYLINDER

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
- Lead(Pb)-free : Lead free completely



Actual size



Specifications (characteristics)

Item	Symbol	Specification	Remarks
Nominal frequency range	f	4.000 MHz to 29.999 MHz	Fundamental *1
		30.000 MHz to 64.000 MHz	3rd overtone *2
Temperature range	Storage temperature	T_stg	-40 °C to +85 °C
	Operating temperature	T_use	-20 °C to +70 °C
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 < 5.5 MHz : See "Available frequencies from 4.0 MHz to less than 5.5 MHz". 8.0 MHz < f < 8.2 MHz: Unavailable.

*2 26.000 MHz $\leq$ f < 30.000 MHz :please contact us for inquiries for 3rd overtone mode.

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

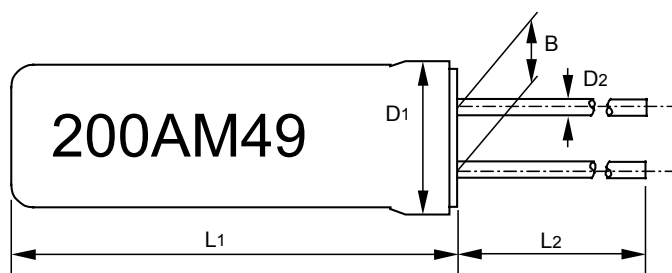
4.000	4.032	4.096	4.190	4.194304	4.433619	4.500	4.800	4.9152
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Motional resistance (ESR)

Frequency (MHz)	4.0 $\leq$ f < 5.5	5.5 $\leq$ f < 6.0	6.0 $\leq$ f < 10.0	10.0 $\leq$ f < 12.0	12.0 $\leq$ f < 16.0	16.0 $\leq$ f < 30.0	30.0 $\leq$ f $\leq$ 36.0	36.0 < f $\leq$ 64.0
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)



Model	L1	L2	D1	D2	B
Under 5.5 MHz	9.3 Max.	9.5 Min.	$\phi 3.1$ Max.	$\phi 0.3$	1.1
Over 5.5 MHz	8.9 Max.	9.5 Min.	$\phi 3.1$ Max.	$\phi 0.3$	1.1