

## CD series

- Low impedance, 105°C V-chip
- Applicable to SMT process
- AEC-Q200 Compliant
- RoHS Compliant



### SPECIFICATIONS

Items	Characteristics									
Capacitance Tolerance	±20% (120Hz , 20°C)									
Operating Temperature Range	-55°C ~ +105°C									
Rated Voltage Range	6.3 ~ 100VDC									
Capacitance Range	1 ~ 1500μF									
Leakage Current	I ≤ 0.01CV or 3(μA), which is greater. (After 2 minutes application of DC rated voltage at 20°C)									
Dissipation Factor (tan δ)	Measurement Frequency:120Hz. Temperature: 20°C									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	80	100
	tanδ ( Max)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07
Low Temperature Stability	Measurement Frequency:120Hz									
Impedance Ratio(Max)	Rated Voltage(V)	6.3	10	16	25	35	50	63	80	100
	Z(-25°C) / Z(20°C)	4	3	2	2	2	2	2	2	2
	Z(-55°C) / Z(20°C)	8	5	4	3	3	3	3	3	3
Load Life	3000 hours with application of rated voltage at 105°C(L < 10mm : 2000hrs)									
	Capacitance Change	within ±30% of Initial Value								
	tan δ	300% or less of Initial Specified Value								
	Leakage Current	Initial Specified Value or less								
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applied. Before the measurement, the capacitance shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.									
	Capacitance Change	Within ±30% of Initial Value								
	tan δ	300% or less of Initial Specified Value								
	Leakage Current	Initial Specified Value or less								
Resistance to Soldering Heat	The capacitors shall be kept on the hott plate maintained at 250°C for 30 seconds.						Capacitance Change	Within ± 10% of Initial Value		
	After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.						tan δ	Initial Specified Value		
							Leakage Current	Initial Specified Value or less		
Marking	Black print on the case top									

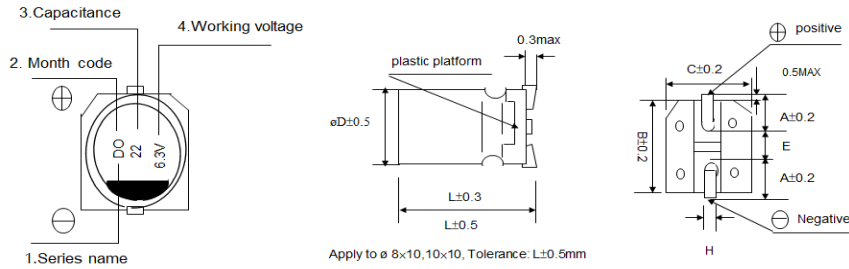
### Frequency Coefficient of Permissible Ripple Current

Frequency (Hz)	120 ≤ F < 1K	1K ≤ F < 10K	10K ≤ F < 100K	100K ≤ F
≤ 33	0.35	0.70	0.90	1.00
33 ~ 150	0.40	0.85	0.92	1.00
> 150	0.60	0.85	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

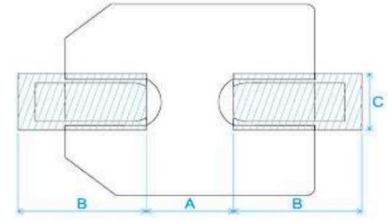
## DIMENSIONS(mm)

### Chip Type



Apply to ø 8x10, 10x10, Tolerance: L±0.5mm

### Land / Pad pattern



ΦD	4*6	5*6	6.3*6	6.3*7.7	8*6.5	8*10	10*10
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5
L	6.0	6.0	6.0	7.7	6.5	10	10
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1

DxL	A	B	C
Φ4	1	2.6	1.6
Φ5	1.4	3	1.6
Φ6.3	1.9	3.5	1.6
Φ8	3	3.5	2.5
Φ10	4	4	2.5
Φ12.5	4.3	5.8	2.5
Φ16	6.6	6.5	5
Φ18	6.6	7.7	5
Φ8(G)	2.5	4.5	4.7
Φ10(G)	3.8	4.8	4.7
Φ12.5(G)	3.8	6.1	6.9
Φ16(G)	5	8	9.5
Φ18(G)	5	8.6	9.5

"(G)" "Anti-vibration Structure"

## Electric Characteristics:

Su'scon P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (°C)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C 100KHz (mA rms)	IMP 100KHz at 25°C (Ω)Max	Load Life (hours)
CD006M220C06PE50V00A	22	±20	6.3	7.2	105	4*6	3	30	90	1.35	2000
CD006M101E5APE50V00A	100	±20	6.3	7.2	105	6.3*5.4	6.3	30	140	1	1000
CD010M220C06PE50V00A	22	±20	10	11.5	105	4*6	3	26	80	18	2000
CD010M101E06PE50V00A	100	±20	10	11.5	105	6.3*6	10	26	230	0.4	2000
CD010M331F10PE50V00A	330	±20	10	11.5	105	8*10	33	26	450	0.17	5000
CD016M100C5APE50V00A	10	±20	16	18.4	105	4*5.4	3	22	30	3	1000
CD016M220C06PE50V00A	22	±20	16	18.4	105	4*6	3.5	22	90	1.35	2000
CD016M221E7DPE50V00A	220	±20	16	18.4	105	6.3*7.7	35	22	280	0.34	2000
CD016M681G10PE50V00A	680	±20	16	18.4	105	10*10	108	22	850	0.08	2000
CD025M330D06PE50V00A	33	±20	25	28.8	105	5*6	8.2	16	170	0.7	2000
CD035M4R7C06PE50V00A	4.7	±20	35	40.3	105	4*6	3	13	90	1.45	2000
CD035M150D06PE50V00A	15	±20	35	40.3	105	5*6	5.2	13	150	0.76	2000
CD035M220D06PE50V00A	22	±20	35	40.3	105	5*6	7.7	13	170	0.7	2000
CD035M331G10PE50V00A	330	±20	35	40.3	105	10*10	115	13	850	0.09	2000
CD050M2R2C06PE50V00A	2.2	±20	50	57.5	105	4*6	3	10	30	5	2000
CD050M4R7C06PE50V00A	4.7	±20	50	57.5	105	4*6	3	10	60	2.9	2000
CD050M100D06PE50V00A	10	±20	50	57.5	105	5*6	5	10	85	1.52	2000
CD050M100E06PE50V00A	10	±20	50	57.5	105	6.3*6	5	10	165	0.88	2000
CD050M220F6BPE50V00A	22	±20	50	57.5	105	8*6.5	11	10	120	0.7	1000
CD050M101F10PE50V00A	100	±20	50	57.5	105	8*10	50	10	350	0.34	2000

## REMARKS:

1. Dissipation Factor Test: at 20°C, 120 Hz
2. Capacitance Test: at 20°C, 120 Hz
3. Ripple Current Test: at 105°C, 100K Hz
4. Leakage Current: Initial specified value or less
5. When have characteristic requested: Load life & shelf life test and etc., judgment standard reference to our catalogue.
6. Remarks: Su'scon Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.

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**CD-REV.1**