

## CN series

- Non-polarity type 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 ~ +85°C						
Rated Voltage Range	6.3 ~ 50VDC						
Capacitance Range	0.1 ~ 100µF						
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
	tanδ (Max)	0.30	0.25	0.20	0.17	0.15	0.15
Low Temperature Stability	Measurement Frequency:120Hz						
Impedance Ratio(Max)	Rated Voltage(V)	6.3	10	16	25	35	50
	Z(-25°C) / Z(20°C)	4	3	2	2	2	2
	Z(-55°C) / Z(20°C)	8	6	4	4	3	3
Load Life	1000 hours with application of rated voltage at 85°C						
	Capacitance Change	within ±20% of Initial Value					
	tan δ	200% 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 85°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 ±20% of Initial Value					
	tan δ	200% 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						

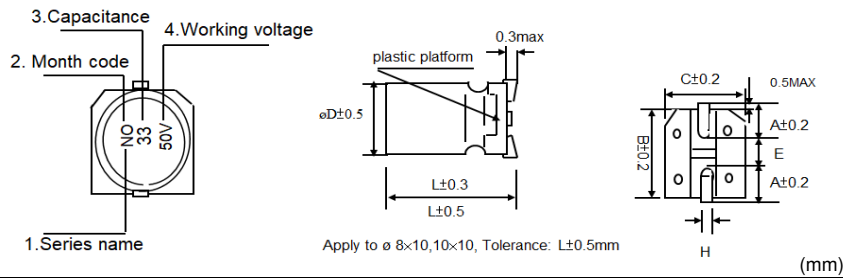
### Frequency Coefficient of Permissible Ripple Current

Frequency (Hz)	50	120	300	1K	≥ 10K
Coefficient	0.70	1.00	1.17	1.36	1.50

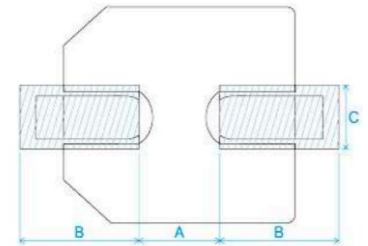
The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

## DIMENSIONS(mm)

### ■ Chip Type



### ■ Land / Pad pattern



$\phi D$	4*5.4	5*5.4	6.3*5.4	6.3*6	6.3*7.7	8*10	10*10
A	1.8	2.1	2.4	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	6.0	7.7	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
$\phi 4$	1	2.6	1.6
$\phi 5$	1.4	3	1.6
$\phi 6.3$	1.9	3.5	1.6
$\phi 8$	3	3.5	2.5
$\phi 10$	4	4	2.5
$\phi 12.5$	4.3	5.8	2.5
$\phi 16$	6.6	6.5	5
$\phi 18$	6.6	7.7	5
$\phi 8(G)$	2.5	4.5	4.7
$\phi 10(G)$	3.8	4.8	4.7
$\phi 12.5(G)$	3.8	6.1	6.9
$\phi 16(G)$	5	8	9.5
$\phi 18(G)$	5	8.6	9.5

"(G)" "Anti-vibration Structure"

## Electric Characteristics

Su'scon P/N	Cap. ( $\mu F$ )	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. ( $^{\circ}C$ )	Nominal Case Size D*L(mm)	Leakage Current Max ( $\mu A$ )	D.F. MAX (%)	R.C 120 Hz (mA rms)	Load Life (Hours)
CN050M330F10PE50V00R	33	$\pm 20$	50	57.5	85	8*10	49	15	90	1000

### REMARKS:

1. Dissipation Factor Test: at 20 $^{\circ}C$ , 120 Hz
2. Capacitance Test: at 20 $^{\circ}C$ , 120 Hz
3. Ripple Current Test: at 85 $^{\circ}C$ , 120 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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