

CDS series

- Low impedance, 105°C 2000 hours High CV
- 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 ~ 50VDC						
Capacitance Range	10 ~ 2200μF						
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)	0.26	0.19	0.16	0.14	0.12	0.10
Low Temperature Stability	Measurement Frequency:120Hz						
	Rated Voltage(V)	6.3	10	16	25	35	50
Impedance Ratio(Max)	Z(-25°C) / Z(20°C)	4	3	2	2	2	2
	Z(-40°C) / Z(20°C)	8	5	4	3	3	3
Load Life	2000 hours with application of rated voltage at 105°C						
	Capacitance Change	within ±30% 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 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	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. After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.			Capacitance Change	Within ± 10% of Initial Value		
				tan δ	Initial Specified Value		
				Leakage Current	Initial Specified Value or less		
Standards	JIS C 5101-4-1 (IEC 60384)						

Frequency Coefficient of Permissible Ripple Current

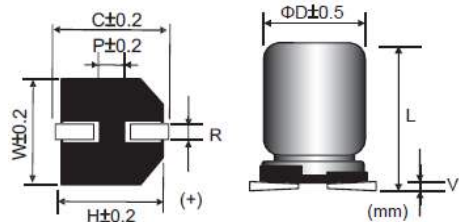
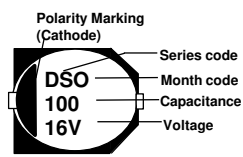
Frequency (Hz)	$120 \leq F < 1\text{K}$	$1\text{K} \leq F < 10\text{K}$	$10\text{K} \leq F < 100\text{K}$	$100\text{K} \leq F$
≤ 470	0.65	0.85	0.95	1.00
> 470	0.70	0.90	0.95	1.00

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)

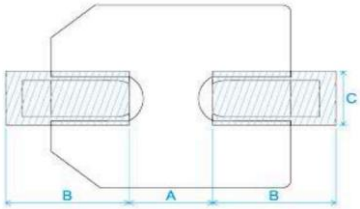
■ Chip Type

Fig.1 ΦD=4~10mm



Size	ΦD	L	W	H	C	R	P	Vmax
4*6	4.0	6.0±0.3	4.3	4.3	5.1	0.5~0.8	1.0	0.3
5*6	5.0	6.0±0.3	5.3	5.3	5.9	0.5~0.8	1.5	0.3
6.3*6	6.3	6.0±0.3	6.6	6.6	7.2	0.5~0.8	2.1	0.3
6.3*7.7	6.3	7.7±0.3	6.6	6.6	7.2	0.5~0.8	2.1	0.3
8*10	8.0	10±0.5	8.4	8.4	9.0	0.7~1.1	3.2	0.3
10*10	10.0	10±0.5	10.3	10.3	11.0	0.7~1.3	4.5	0.3

■ Land / Pad pattern



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)
CDS016M101D06PE50V00A	100	±20	16	18.4	105	5*6	16	16	240	0.400	2000
CDS016M221E06PE50V00A	220	±20	16	18.4	105	6.3*6	35	16	300	0.300	2000
CDS025M220C06PE50V00A	22	±20	25	28.8	105	4*6	5.5	14	160	1.00	2000
CDS035M220C06PE50V00A	22	±20	35	40.3	105	4*6	7.7	12	160	1.00	2000

REMARKS:

1. Dissipation Factor Test:

2. Capacitance Test:

3. Ripple Current Test:

4. Leakage Current:

5. When have characteristic requested:

6. Remarks:
- at 20°C, 120 Hz

at 20°C, 120 Hz

at 105°C, 100K Hz

Initial specified value or less;

Load life & shelf life test and etc., judgment standard reference to our catalogue.

Su'scon Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.

US Contact Information

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CDS-REV.1