



Conductive Polymer Aluminum Solid Capacitor DR Cap

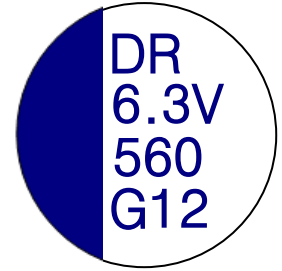
DS series

■ Features

- Low ESR at a high frequency range
- High ripple current capability
- Guaranteed at 105°C for 2000 hrs

■ Applications

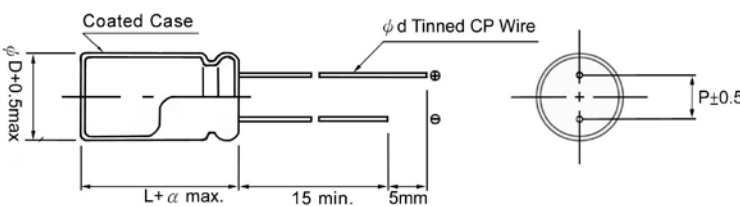
- SPS, D/D Converter, D/A Inverter
- MB, VGA, Navigator, Server
- PDP/LCD TV, LCD Monitor
- RoHS compliance and lead-free



Specifications

Items	Characteristics								
Category Temperature Range	-55 ~ +105°C								
Rated Working Voltage Range	2.5 ~ 16Vdc								
Nominal Capacitance Range	82 ~ 2700 μF								
Capacitance Tolerance	±20% (M) (120Hz, 20°C)								
DC Leakage Current	Value in characteristics table (After rated voltage applied for 2 minutes)								
Dissipation Factor (tanδ)	Value in characteristics table								
ESR (100 K ~ 300 KHz, 20°C)	Value in characteristics table								
Temperature Characteristic Impedance Ratio at 100 KHz	<table border="1"> <tr> <td>-55°C</td> <td>Z / Z_{20°C}</td> <td>0.75 ~ 1.25</td> </tr> <tr> <td>+105°C</td> <td>Z / Z_{20°C}</td> <td>0.75 ~ 1.25</td> </tr> </table>	-55°C	Z / Z _{20°C}	0.75 ~ 1.25	+105°C	Z / Z _{20°C}	0.75 ~ 1.25		
-55°C	Z / Z _{20°C}	0.75 ~ 1.25							
+105°C	Z / Z _{20°C}	0.75 ~ 1.25							
Load Life (After 105°C, 2000 hrs, rated voltage applied)	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial measured value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 150% of the specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of the specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Less than the specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial measured value	Dissipation Factor	Less than 150% of the specified value	ESR	Less than 150% of the specified value	Leakage Current	Less than the specified value
Capacitance change	Within ±20% of the initial measured value								
Dissipation Factor	Less than 150% of the specified value								
ESR	Less than 150% of the specified value								
Leakage Current	Less than the specified value								
Moisture Resistance (After 60°C, 90~95% RH, 1000 hrs, no voltage)	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial measured value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 150% of the specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of the specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Less than the specified value</td> </tr> </table> <p>* Leakage Current should be tested after voltage treatment.</p>	Capacitance change	Within ±20% of the initial measured value	Dissipation Factor	Less than 150% of the specified value	ESR	Less than 150% of the specified value	Leakage Current	Less than the specified value
Capacitance change	Within ±20% of the initial measured value								
Dissipation Factor	Less than 150% of the specified value								
ESR	Less than 150% of the specified value								
Leakage Current	Less than the specified value								
Reverse Voltage Guarantee	Less than 10% of the rated voltage								
Surge Voltage (In normal temperature, Protective resistor and discharge resistor : 1KΩ)	Cycle number : 1000cycles Charge : 30 ± 5 seconds , Discharge : 5.5 minutes Charge + Discharge = 6 ± 0.5 minutes (as 1 cycle) * The capacitors shall meet the following spec after 1000 cycles.								

Dimensions (mm)



Rated Voltage (V)	2.5	4.0	6.3	10	16
Surge Voltage (V)	3.3	5.2	8.2	11.5	18.4

Size Code	φ D	L	α	P	φ d
C04	6.3	4.2	0.5	2.5	0.45
C06	6.3	6	0.5	2.5	0.45
C09	6.3	9	1.0	2.5	0.5
C11	6.3	11	1.0	2.5	0.5
E08	8	8	1.5	3.5	0.6
E12	8	12	1.5	3.5	0.6
F12	10	12	1.5	5.0	0.6

The sum of DC voltage and the peak of ripple voltage must not exceed the rated voltage.



Conductive Polymer Aluminum Solid Capacitor DR Cap

Table DS series Characteristics List

Rated Voltage (V)	Nominal Capacitance (120Hz, 20°C) (μF)	Size Code	φD	L	ESR (100K~300KHz) (mΩ) (max)	Max Ripple Current (100KHz, 105°C) (mA rms)	Leakage Current (μA) (max)	DF (tanδ) (120Hz, 20°C) (max)	Part Number
2.5	390	C06	6.3	6	20	2980	195	0.08	DRDS0390M2RC06
	560	E08	8	8	7	6100	280	0.08	DRDS0560M2RE08
	820	C09	6.3	9	7	3500	500	0.08	DRDS0820M2Rc09
	820	E08	8	8	7	6100	410	0.08	DRDS0820M2RE08
	1200	E08	8	8	7	5860	600	0.08	DRDS1200M2RE08
	1200	E12	8	12	8	6100	600	0.08	DRDS1200M2RE12
	1500	F12	10	12	7	5860	750	0.08	DRDS1500M2RF12
	2700	F12	10	12	8	5860	1350	0.08	DRDS2700M2RF12
4	560	E08	8	8	7	5580	448	0.08	DRDS0560M04E08
	680	E12	8	12	7	6100	544	0.08	DRDS0680M04E12
	820	E08	8	8	7	5580	656	0.08	DRDS0820M04E08
	1200	F12	10	12	8	6640	960	0.08	DRDS1200M04F12
6.3	220	C06	6.3	4.2	17	1670	700	0.10	DRDS0220M6RC04
	330	C06	6.3	6	15	3160	300	0.10	DRDS0330M6RC06
	560	C09	6.3	9	7	3500	705	0.10	DRDS0560M6RC09
	560	E08	8	8	7	5700	705	0.10	DRDS0560M6RE08
	680	E08	8	8	9	5700	857	0.10	DRDS0680M6RE08
	820	E08	8	8	9	5700	1033	0.10	DRDS0820M6RE08
	1000	E08	8	8	7	5700	1260	0.10	DRDS1000M6RE08
	1000	F12	10	12	7	6100	1260	0.10	DRDS1000M6RF12
10	1500	F12	10	12	13	5560	1890	0.10	DRDS1500M6RF12
	470	E08	8	8	7	3900	940	0.12	DRDS0470M10E08
	680	E12	8	12	20	3900	1360	0.08	DRDS0680M10E12
	680	F12	10	12	7	6100	1360	0.08	DRDS0680M10F12
16	1200	F12	10	12	10	5580	2400	0.08	DRDS1200M10F12
	22	C06	6.3	6	50	1620	70	0.12	DRDS0022M16C06
	47	C06	6.3	6	40	1810	150	0.12	DRDS0047M16C06
	100	C06	6.3	6	35	2120	320	0.12	DRDS0100M16C06
	150	C06	6.3	6	25	2820	500	0.12	DRDS0150M16C06
	180	E08	8	8	16	3160	576	0.08	DRDS0180M16E08
	180	E12	8	12	16	4360	576	0.08	DRDS0180M16E12
	220	E12	8	12	14	3640	704	0.08	DRDS0220M16E12
	270	E08	8	8	11	4700	864	0.08	DRDS0270M16E08
	270	E12	8	12	11	5080	864	0.08	DRDS0270M16E12
	330	E08	8	8	13	4700	1056	0.08	DRDS0330M16E08
	470	E12	8	12	11	5400	1504	0.08	DRDS0470M16E12
	470	F12	10	12	10	6100	1504	0.08	DRDS0470M16F12
	560	E12	8	12	16	5400	1792	0.08	DRDS0560M16E12
820	F12	10	12	15	6100	2624	0.08	DRDS0820M16F12	

Frequency coefficient for ripple current

Frequency	100Hz ≤ f < 1 KHz	1 KHz ≤ f < 10 KHz	10 KHz ≤ f < 100 KHz	100 KHz ≤ f ≤ 500 KHz
Coefficient	0.05	0.3	0.7	1