

# DCR

# Super Capacitors



## APPLICATIONS

- Battery backup
- Battery alternative
- Wind Power Generation
- LED Displays
- Pulse power
- DC-DC converters
- Mechanical actuators
- Hand Held Devices

## FEATURES

- High Capacitance
- Long Life
- Low ESR
- Very fast charge/discharge cycling
- Circuit board mountable
- High power density
- RoHS compliant
- Compact size

## SPECIFICATIONS

<b>Operating Temperature Range</b>		-25°C to +60°C	
<b>Storage Temperature</b>		-40°C to +60°C	
<b>Capacitance Tolerance</b>		+50%/-20% @ 20°C	
<b>Surge voltage</b>	<b>WVDC</b>	<b>2.3</b>	
	<b>SVDC</b>	<b>2.5</b>	
<b>Maximum Current</b>		See standard part listing	1 second discharge to ½ WVDC
<b>Leakage Current</b>		See standard part listing	72 hours, 25°C
<b>Life time</b>		<b>1000 hours at rated voltage and 60°C</b>	
		Capacitance change	<30% of initially measured values
		ESR	<400% of initially measured values
<b>Life cycles</b> ( 25°C) 1 cycle= Charge to WVDC for 20s, constant voltage charging for 10s, discharge to ½ WVDC for 20s, rest for 10 s		<b>20,000 cycles</b>	
		Capacitance change	<30% of initially measured values
		ESR	<400% of initially measured values



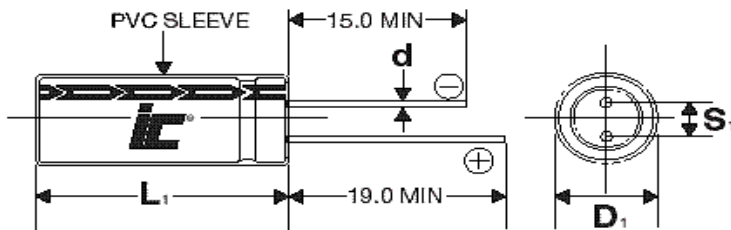
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## Super Capacitors

### Standard Part Listing

Cap (F)	VDC	IC PART NUMBER	Max current (A)	Operating current (A)	ESR AC (mΩ, 1kHz)	ESR DC (mΩ)	Max stored energy (Wh)	LC (mA, 72Hrs, 25°C)	Specific Energy Gravimetric DENSITY (Wh/kg)	Specific Energy Volumetric Density (Wh/l)	Specific power gravi Metric (kW/kg)	Specific Power volu Metric (kW/l)	Weight (grams)	Volume (mL)	Dims DxL (mm)
10	2.3	106DCR2R3SGU	11.5	2.30	220	400	0.0073	5	3.6736	4.6774	0.794	1.0103	2	1.5708	10x20
22	2.3	226DCR2R3STU	25.3	5.06	120	170	0.0162	11	4.6852	6.5858	1.082	1.5214	3.45	2.4544	12.5x20
30	2.3	306DCR2R3STV	34.5	6.90	100	160	0.0220	15	5.8004	7.1845	1.044	1.2932	3.8	3.068	12.5x25
50	2.3	506DCR2R3SKV	57.5	11.50	60	100	0.0367	25	5.248	7.3084	0.907	1.2629	7	5.0265	16x25
70	2.3	706DCR2R3SKY	80.5	16.10	50	85	0.0514	35	6.1593	7.3084	0.894	1.0613	8.35	7.0372	16x35
120	2.3	127DCR2R3SLZ	138.0	27.60	35	65	0.0882	60	6.6291	8.6618	0.734	0.9595	13.3	10.179	18x40
220	2.3	227DCR2R3SNI	253.0	50.60	25	45	0.1616	110	6.4398	9.0472	0.562	0.7896	25.1	17.866	22x47
400	2.3	407DCR2R3SVT	460.0	92.00	20	25	0.2939	200	4.432	9.2393	0.383	0.7983	66.31	31.809	30x45
600	2.3	607DCR2R3SVB	690.0	138.00	15	20	0.4408	300	6.5649	10.394	0.473	0.7484	67.15	42.412	30x60

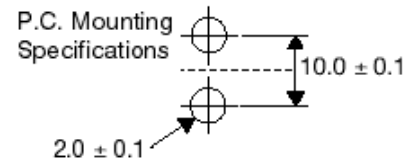
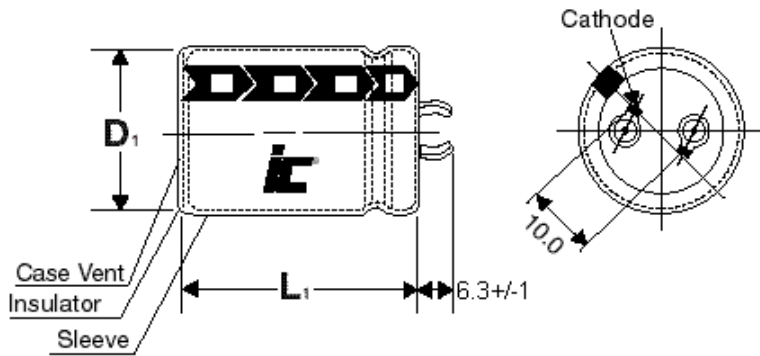
### Diameters: ≤18 mm



D	10	16	18
S	5.0	7.5	7.5
d	0.6	0.8	0.8

$L_1 = L + 1.5\text{mm}$   
 $D_1 = D + 0.5\text{mm}$   
 $S_1 = S \pm 0.5\text{mm}$

### Diameters: ≥22mm



$L_1 = L + 2.0\text{mm}$   
 $D_1 = D \pm 1.0\text{mm}$