

# DCN

# Super Capacitors



## APPLICATIONS

- Battery backup
- Battery alternative
- Audio systems
- LED Displays
- Pulse power
- DC-DC converters
- Mechanical actuators
- Hand Held Devices

## FEATURES

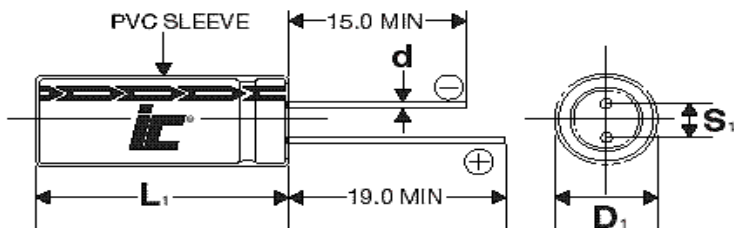
- High Capacitance
- Long Life
- Low ESR
- Very fast charge/discharge cycling
- Circuit board mountable
- High power density
- RoHS compliant
- Compact size
- IEC 62391 compliant

## SPECIFICATIONS

<b>Operating Temperature Range</b>		-40°C to +65°C		
<b>Storage Temperature</b>		-40°C to +70°C		
<b>Capacitance Tolerance</b>		+30%/-10% @ 20°C (Q tolerance code) +20%/-20% @ 20°C (M tolerance code) +10%/-10% @ 20°C (K tolerance code)		
<b>Surge voltage</b>	<b>WVDC</b>	<b>2.7</b>	<b>5.4</b>	
	<b>SVDC</b>	<b>2.85</b>	<b>5.7</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 (25°C)</b>		<b>10 years</b>		
		Capacitance change	<30% of initially measured values	
		ESR	<200% of initially measured values	
		Leakage current	< specified maximum value	
<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>500,000 cycles</b>		
		Capacitance change	<30% of initially measured values	
		ESR	<200% of initially measured values	
		Leakage current	< specified maximum value	

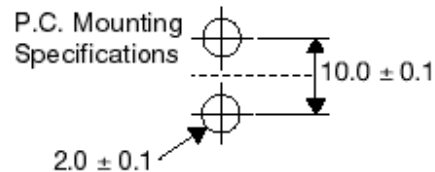
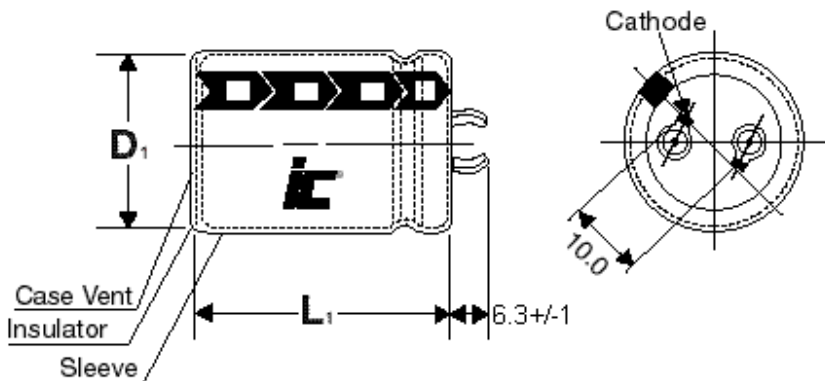


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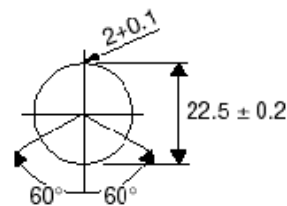
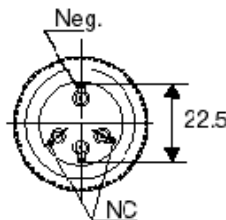
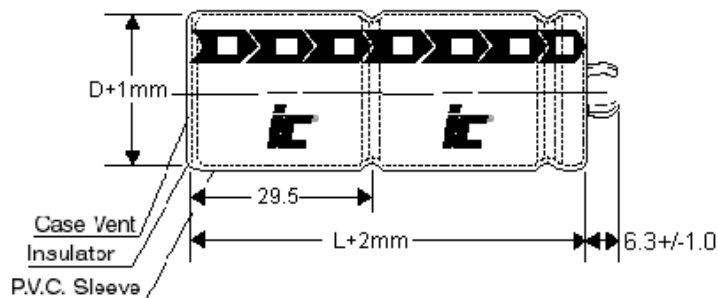


D	8	10	16	18
S	3.5	5.0	7.5	7.5
d	0.6	0.6	0.8	0.8

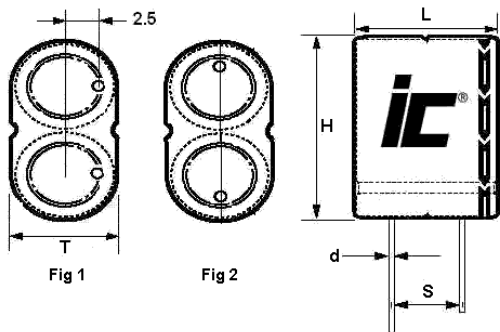
$L_1 = L + 1.5\text{mm}$   
 $D_1 = D + 0.5\text{mm}$   
 $S_1 = S \pm 0.5\text{mm}$



### For 35x62 case sizes



### 5.4 Volt units only



Capacitance (F)	Dims (LxHxT) (mm) +1.0mm	Fig	Lead spacing S (mm) +/-0.5mm	Lead diameter d (mm)
0.25	17X16X9	2	12.3	0.6
0.5	17X16X9	2	12.3	0.6
1	17X20X9	2	12.3	0.6
1.5	17X23X9	1	8.5	0.6
2	21X24X11	2	15.5	0.6
2.5	22X24X11	1	10.5	0.6
3	21X24X11	2	15.5	0.6
5	22X34X11	2	15.5	0.6

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## Standard Part Listing

Cap (uF)	VDC	IC PART NUMBER	Max current (A)	ESR AC (mΩ, 1kHz)	ESR DC (mΩ)	Max stored energy (Wh)	LC (mA)	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 DxDxT (mm)
0.25	5.4	254DCN5R4M	0.3375	1400	4000	0.001	0.02	0.4050	0.3760	2.0829	1.93358	2.5	2.693	17x16x9
0.5	2.7	504DCN2R7M	0.3375	700	2000	0.0005	0.002	0.5063	0.8396	2.6036	4.3177	1	0.603	8x12
0.5	5.4	504DCN5R4M	0.7941	700	1400	0.002	0.06	0.8100	0.7785	4.1657	4.00395	2.5	2.601	17x16x9
1	2.7	105DCN2R7M	0.7941	350	700	0.001	0.006	1.0125	1.6791	5.2071	8.63539	1	0.603	8x12
1	5.4	105DCN5R4M	1.4211	400	900	0.0041	0.1	1.1571	1.2254	5.2071	5.51437	3.5	3.305	17x20x9
1.5	2.7	155DCN2R7M	1.1571	250	500	0.0015	0.008	1.2656	2.1573	6.075	10.3551	1.2	0.704	8x14
1.5	5.4	155DCN5R4Q	3.1154	150	200	0.0061	0.12	1.7357	1.8984	13.886	15.1875	4.5	3.2	17x23x9
2	2.7	205DCN2R7M	1.4211	200	450	0.002	0.01	1.5577	2.5187	7.0096	11.334	1.3	0.804	8x16
2	5.4	205DCN5R4M	2.8125	240	460	0.0081	0.14	1.6200	1.3696	6.075	5.13612	5	5.914	21x24x11
2.5	5.4	255DCN5R4Q	5.0943	100	130	0.0101	0.15	2.0250	1.8750	14.58	13.5	5	5.4	22x24x11
3	2.7	305DCN2R7Q	3.2741	61	79	0.003	0.005	2.0250	3.0375	19.918	29.877	1.5	1	8x20
3	5.4	305DCN5R4M	4.4022	160	280	0.0122	0.12	2.0250	2.0544	7.5938	7.70418	6	5.914	21x24x11
3.3	2.7	335DCN2R7M	2.1668	150	320	0.0033	0.012	2.2275	3.3246	8.1	12.0896	1.5	1.005	8x20
4	2.7	405DCN2R7M	2.8125	120	230	0.0041	0.014	2.0250	2.5780	7.5938	9.66741	2	1.571	10x20
5	2.7	505DCN2R7Q	3.375	110	200	0.0051	0.015	2.0250	3.1641	6.6273	10.3551	2.5	1.6	10x20
5	5.4	505DCN5R4M	7.5	120	160	0.0203	0.3	2.5313	2.4623	7.5938	7.38692	8	8.224	22x34x11
6	2.7	605DCN2R7M	4.1327	90	160	0.0061	0.017	2.5313	4.3177	8.4375	14.3923	2.4	1.407	8x30
6	2.7	605DCN2R7MGU	4.4022	80	140	0.0061	0.012	2.4300	19.3471	9.1125	72.5518	2.5	0.314	10x20
8	2.7	805DCN2R7M	5.5102	70	120	0.0081	0.02	2.7000	51.5924	8.6786	165.833	3	0.157	10x25
10	2.7	106DCN2R7Q	7.5	60	80	0.0101	0.03	2.5313	4.3085	7.5938	12.9255	4	2.35	10x30
22	2.7	226DCN2R7M	14.925	32	45	0.0223	0.045	3.4269	5.1031	8.762	13.0477	6.5	4.365	12.5x35.5
25	2.7	256DCN2R7Q	16.463	30	42	0.0253	0.049	3.5156	5.0423	8.4375	12.1016	7.2	5.02	16x25
30	2.7	306DCN2R7M	19.756	25	35	0.0304	0.065	3.5735	4.7963	8.5765	11.5111	8.5	6.333	16x31.5
50	2.7	506DCN2R7Q	33.75	15	20	0.0506	0.075	3.6161	4.9632	8.6786	11.9118	14	10.2	18x40
60	2.7	606DCN2R7M	36.818	15	20	0.0608	0.1	3.7969	5.3052	7.5938	10.6104	16	11.451	18x45
70	2.7	706DCN2R7M	39.375	15	20	0.709	0.1	4.4297	6.1894	7.5938	10.6104	16	11.451	18x45
100	2.7	107DCN2R7Q	61.364	9	12	0.1013	0.26	4.8214	5.9211	9.6429	11.8421	21	17.1	22x45
150	2.7	157DCN2R7M	65.323	8	14	0.1519	0.5	4.3393	6.1879	6.5089	9.2818	35	24.544	25x50
200	2.7	207DCN2R7M	71.053	8	14	0.2025	0.6	5.0625	7.1621	5.6953	8.05731	40	28.274	30x50
300	2.7	307DCN2R7M	77.885	8	14	0.3038	0.8	5.0625	5.2618	3.7969	3.94638	60	57.727	35x50
400	2.7	407DCN2R7K	93.103	5	12	0.405	1.2	5.7857	6.7500	5.2071	6.075	70	60	35x62



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