

DCN

Super Capacitors



FEATURES

Very fast charge/discharge – High power density – IEC 62391 compliant – Circuit board mountable

APPLICATIONS

Battery backup/ alternative – Pulse power – Energy harvesting – LED Displays – Mechanical actuators – Audio systems

Operating Temperature Range		-40°C to +60°C	
Storage Temperature		-40°C to +70°C	
Capacitance Tolerance @ 20°C		+30%/-10% (Q tolerance), +20%/-20% (M tolerance) +10%/-10% (K tolerance), +50%/-20% (S tolerance)	
Voltage	WVDC	2.7	5.5
	SVDC	2.8	5.7
Maximum Current	See standard part listing		1 second discharge to ½ WVDC
Operating Current	See standard part listing		5 second discharge to ½ WVDC
Leakage Current	See standard part listing		72 hours, 25°C
Life Time	1000 hours with rated voltage applied at 60°C		
	Capacitance change	±30% of initially measured values	
	ESR	≤200% of initially specified values	
	Leakage current	≤ specified maximum value	
Shelf Life	1000 hours with no voltage applied at 60°C		
	Capacitance change	±30% of initially measured values	
	ESR	≤200% of initially specified values	
Life Cycles (25°C) 1 cycle= Charge to WVDC for 20s, constant voltage charging for 10s, discharge to ½ WVDC for 20s, rest for 10 s	500,000 cycles		
	Capacitance change	±30% of initially measured values	
	ESR change	≤200% of initially specified values	

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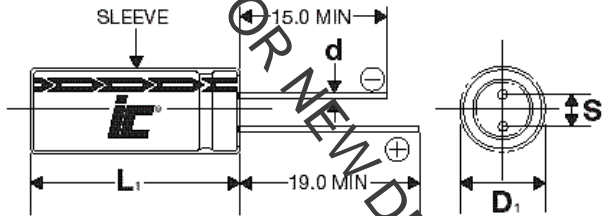
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D < 18mm

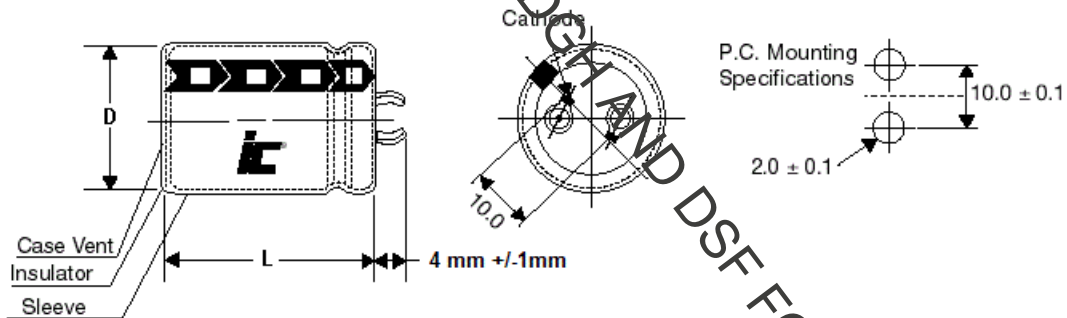


Lead spacing VS. Case diameter						
D	4	8(L<20)	8(L>20)	10	16	18
S	1.5	3.5	3.5	5.0	7.5	7.5
d	0.45	0.5	0.6	0.6	0.8	0.8

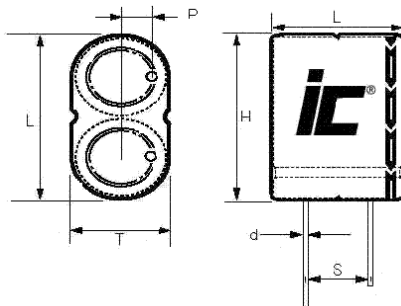
$L_1 = L (< 20\text{mm} + 1.5\text{mm}) (\geq 20\text{mm} + 2.0\text{mm})$
 $D_1 = D (< 20\text{mm} + 0.5\text{mm}) (\geq 20\text{mm} + 1.0\text{mm})$
 $S_1 = S \pm 0.5\text{mm}$

Snap in type

D ≥ 20mm



5.5 Volt units



Capacitance (F)	Dims (LxHxT) (mm) +1.0mm	Lead spacing S (mm) +/-0.5mm	Lead diameter d (mm)	P (mm)
1	17.5x19.5x9	11.8	0.6	1.75
1.5	17.5x23.5x9	8.3	0.6	1.75
2	21.5x23.5x11	15.3	0.6	2.5
2.5	21.5x23.5x11	15.3	0.6	2.5

NOT RECOMMENDED FOR NEW DESIGN

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High pulse power, extends battery life

WVDC	Capacitance (F)	IC PART NUMBER	MAX Current (A)	ESR AC 1 kHz (mΩ)	DC ESR (mΩ) 20°C	Max stored energy (mWh)	LC (mA), (72 hrs)	Specific Energy Gravimetric Density (wh/kg)	Specific Energy Volumetric Density (wh/l)	Specific Power Gravimetric Density (kw/kg)	Specific Power Volumetric Density (kw/l)	Weight (grams)	Volume (mL)	Dims DxD LxHxT (mm)	Lead Spacing (mm)
2.7	0.3	304DCN2R7SCBR	0.5	1000	1500	0.30375	0.006	1.2	0.879	2.333	13.18	2.012	0.0138	4x11	1.5
2.7	1.0	105DCN2R7S	0.73	400	850	1.0125	0.008	1.0771	1.6786	1.0949	1.7062	0.94	0.603	8x12	3.5
2.7	2.0	205DCN2R7S	1.39	280	470	2.025	0.01	1.7609	2.5179	1.6185	2.3143	1.15	0.804	8x16	3.5
2.7	3.0	305DCN2R7Q	2.31	160	250	3.0375	0.012	2.2668	3.0215	2.6113	3.4807	1.34	1.005	8x20	3.5
2.7	3.3	335DCN2R7MGJG	2.36	160	270	3.34125	0.014	1.6	2.127	1.58	2.063	2.09	1.005	10x20	5
2.7	4.7	475DCN2R7SGJG	2.92	140	250	4.7588	0.016	2.2134	3.0295	1.6275	2.2277	2.15	1.571	10x20	5
2.7	5.0	505DCN2R7Q	3.375	110	200	5.0625	0.015	2.025	3.2229	1.7496	2.7846	2.5	1.571	10x20	5
2.7	10.0	106DCN2R7M	5.87	60	130	10.125	0.03	3.3638	4.2972	2.2356	2.856	3.01	2.356	10x30	5
2.7	10.0	106DCN2R7STJD	5.63	80	140	10.125	0.03	2.5859	3.3002	1.5981	2.0367	3.91	3.068	12.5x25	5
2.7	22.0	226DCN2R7SKJD	10.3	40	85	22.275	0.06	2.9542	4.4315	1.365	2.0475	7.54	5.027	16x25	7.5
2.7	25.0	256DCN2R7Q	16.46	30	60	25.3125	0.049	7.54	5.0358	3.1654	4.1437	7.54	5.027	16x25	7.5
2.7	30.0	306DCN2R7M	14.5	30	60	30.375	0.07	3.7593	5.0358	1.8045	2.4172	8.08	6.032	16x30	7.5
2.7	50.0	506DCN2R7Q	22.5	25	40	50.625	0.16	3.061	4.9736	1.058	2.1486	13.01	10.179	18x40	7.5
2.7	100.0	107DCN2R7Q	35.5	18	28	101.25	0.3	4.6107	5.919	1.4227	1.8264	21.96	17.106	22x45	10
2.7	100.0	107DCN2R7SLB	35.5	20	28	101.25	0.3	5.0373	6.6315	1.5544	2.0463	20.1	15.268	18x60	7.5
2.7	150.0	157DCN2R7M	42.6	16	25	157.875	0.55	4.8522	5.6254	1.118	1.2961	31.3	26.998	25x55	10
2.7	200.0	207DCN2R7M	54	15	20	202.5	0.7	4.927	5.7296	1.0642	1.2376	41.1	35.343	30x50	10
2.7	250.0	257DCN2R7SDP	61.4	13	18	253.125	0.8	5.3289	6.5109	1.0297	1.2628	47.5	38.877	30x55	10
2.7	350.0	357DCN2R7M	90.9	10	12	354.375	1	5.0053	6.1388	1.0297	1.2628	70.8	57.727	35x60	10
2.7	400.0	407DCN2R7Q	93.1	10	12	405	1.2	5.7857	7.016	1.0414	1.263	70	57.7	35x60	10
5.5	1.0	105DCN5R5M	1.42	600	850	4.2139	0.1	1.1571	1.3187	1.1109	1.2659	3.5	3.071	17.5x19.5x9	11.8
5.5	1.5	155DCN5R5M	4.125	320	500	6.3021	0.12	1.40046	1.70269	4.0333	4.9	4.5	3.701	17.5x23.5x9	8.3
5.5	2.0	205DCN5R5M	2.81	300	470	8.4028	0.14	2.02	10.0899	11.2	5.96	5	5.558	21.5x23.5x11	15.3
5.5	2.5	255DCN5R5Q	5.09	220	400	10.5035	0.15	2.025	1.8218	5.3834	4.8431	5	5.558	21.5x23.5x11	15.3

NOT RECOMMENDED FOR NEW DESIGN OR DSF FOR POSSIBLE REPLACEMENT