



Low ESR Supercapacitor

FEATURES

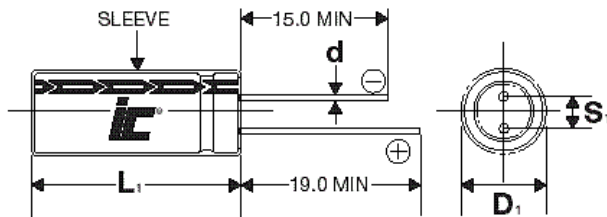
Very Fast Charge/Discharge – High Power Density – Lower ESR – RoHS Compliant

APPLICATIONS

Battery Backup/Alternative – Pulse Power – Energy Harvesting – LED Displays – Mechanical Actuators – Audio Systems

Operating Temperature Range		-40°C to +65°C		
Storage Temperature		-40°C to +70°C		
Capacitance Tolerance @ 20°C		+30%/-10% (Q tolerance)		
Surge Voltage	WVDC	2.7	5.5	
	SVDC	2.85	5.8	
Life Time		1000 hours with rated voltage applied at 65°C		
		Capacitance change	≤30% of initially measured values	
		ESR	≤200% of initially specified values	
		Leakage current	≤100% 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 10s		500,000 cycles		
		Capacitance change	<30% of initially measured values	
		ESR change	<400% of initially specified values	

D = 8 to 18mm

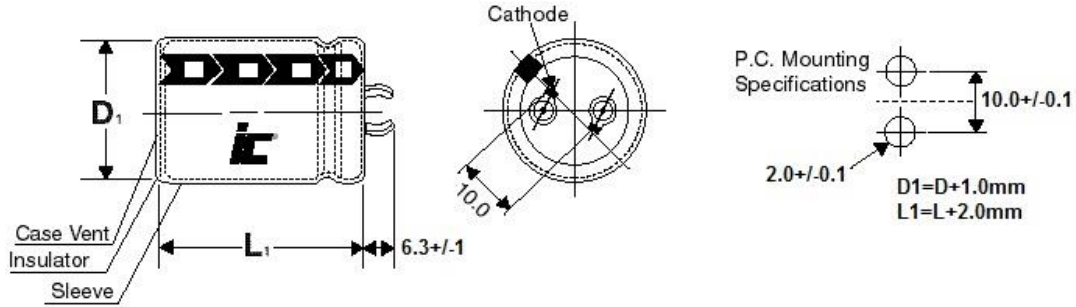


Lead spacing VS. Case diameter					
D	8	10	12.5	16	18
S	3.5	5.0	5.0	7.5	7.5
d	0.6	0.6	0.6	0.8	0.8
α	1.5	2.0	2.0	2.0	2.0

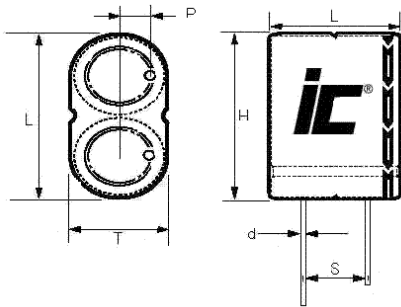
$L_1 = L + \alpha$ mm
 $D_1 = D + 0.5$ mm
 $S_1 = S + 0.5$ mm



Capacitance 100F to 350F



5.5 Volt units



Capacitance (F)	Dims (LxHxT) (mm) +1.0mm	Lead spacing (S) (mm) +/-0.5mm	Lead diameter (d) (mm)
0.5	17x15x8.5	12	0.6
1	17x17x8.5	12	0.6
1.5	17x23x8.5	12	0.6
2.5	21x23x11	15.5	0.6
3.5	21x27x11	15.5	0.6
5	26x27x13	18	0.6

DGH

High pulse power, extends battery life

Capacitance (F)	WVDC	IC PART NUMBER	MAX Current (A) (1 Sec.)	Maximum Continuous Current (A) ($\Delta T=15^{\circ}C$)	Short Circuit Current (A)	ESR AC 1 kHz (m Ω)	DC ESR (m Ω) 20°C	Max stored energy (mWh)	LC (mA), (72 hrs)	Energy Density (Wh/kg)	Energy Volumetric Density (Wh/l)	Power Density (kW/kg)	Power Volumetric Density (kW/l)
0.5	5.5	DGH504Q5R5	0.982	0.6	6.875	400	800	2.101	0.008	0.955	0.855	2.063	1.847
1.0	2.7	DGH105Q2R7	0.964	0.6	6.75	200	400	1.013	0.008	0.92	1.44	1.988	3.109
1.0	5.5	DGH105Q5R5	1.833	0.7	11	260	500	4.201	0.01	1.681	1.71	2.904	2.955
1.5	5.5	DGH155Q5R5	2.845	1.2	18.333	160	300	6.302	0.012	2.101	1.896	4.033	3.641
2.0	2.7	DGH205Q2R7	1.8	0.7	10.8	130	250	2.025	0.01	1.688	2.879	2.916	4.975
2.5	5.5	DGH255Q5R5	4.167	1.3	21.154	140	260	10.503	0.016	2.02	1.977	2.685	2.628
3.0	2.7	DGH305Q2R7	2.792	1.2	18	80	150	3.038	0.012	2.17	3.023	4.166	5.804
3.3	2.7	DGH335Q2R7	2.98	1.2	18	80	150	3.341	0.014	2.228	3.325	3.888	5.804
3.5	5.5	DGH355Q5R5	6.17	1.7	34.375	110	160	14.705	0.02	2.451	2.358	3.781	3.638
5.0	2.7	DGH505Q2R7	4.091	1.3	20.769	70	130	5.063	0.016	2.531	3.225	3.365	4.286
5.0	5.5	DGH505Q5R5	8.594	2.1	45.833	80	120	21.007	0.03	2.531	2.302	3.645	3.315
7.0	2.7	DGH705Q2R7	6.058	1.7	33.750	55	80	7.088	0.02	2.835	3.611	4.374	5.572
10.0	2.7	DGH106Q2R7	8.438	2.4	45	40	60	10.125	0.03	3.894	5.159	5.608	7.429
10.0	2.7	DGH106Q2R7B	8.438	2.1	45	40	60	10.125	0.03	2.978	4.299	4.288	6.191
15.0	2.7	DGH156Q2R7	11.571	2.4	54	30	50	15.188	0.045	3.375	4.127	3.888	4.755
25.0	2.7	DGH256Q2R7	18	3.1	77.143	25	35	25.313	0.08	2.978	5.038	2.941	4.975
50.0	2.7	DGH506Q2R7	32.143	5.2	122.727	15	22	50.625	0.14	3.616	4.976	2.84	3.909
70.0	2.7	DGH706Q2R7	39.375	5.8	135	14	20	70.875	0.16	3.938	5.573	2.43	3.439
100.0	2.7	DGH107Q2R7	61.364	8.3	225	8	12	101.25	0.3	4.821	5.922	3.471	4.264
200.0	2.7	DGH207Q2R7	90	10	270	6	10	202.5	0.7	5.192	5.732	2.243	2.476
350.0	2.7	DGH357Q2R7	212.36	18.9	771.429	3	3.5	354.375	1	5.452	6.134	3.845	4.329

DGH

High pulse power, extends
battery life

Capacitance (F)	WVDC	IC PART NUMBER	Weight (grams)	Volume (mL)	Dims DxL LxHxT (mm)	Lead Spacing S (mm)	Lead Diameter d (mm)
0.5	5.5	DGH504Q5R5	2.2	2.457	17x15x8.5	12	0.6
1.0	2.7	DGH105Q2R7	1.1	0.703	8x13	3.5	0.6
1.0	5.5	DGH105Q5R5	2.5	2.457	17x17x8.5	12	0.6
1.5	5.5	DGH155Q5R5	3	3.324	17x23x8.5	12	0.6
2.0	2.7	DGH205Q2R7	1.2	0.703	8x14	3.5	0.6
2.5	5.5	DGH255Q5R5	5.2	5.313	21x23x11	15.5	0.6
3.0	2.7	DGH305Q2R7	1.4	1.005	8x20	3.5	0.6
3.3	2.7	DGH335Q2R7	1.5	1.005	8x20	3.5	0.6
3.5	5.5	DGH355Q5R5	6	6.237	21x27x11	15.5	0.6
5.0	2.7	DGH505Q2R7	2	1.57	10x20	5	0.6
5.0	5.5	DGH505Q5R5	8.3	9.126	26x27x13	18	0.6
7.0	2.7	DGH705Q2R7	2.5	1.963	10x25	5	0.6
10.0	2.7	DGH106Q2R7	2.6	1.963	10x30	5	0.6
10.0	2.7	DGH106Q2R7B	3.4	2.355	12.5x25	5	0.6
15.0	2.7	DGH156Q2R7	4.5	3.68	12.5x30	5	0.6
25.0	2.7	DGH256Q2R7	8.5	5.024	16x25	7.5	0.8
50.0	2.7	DGH506Q2R7	14	10.174	18x40	7.5	0.8
70.0	2.7	DGH706Q2R7	18	12.717	18x50	7.5	0.8
100.0	2.7	DGH107Q2R7	21	17.097	22x45	10	0
200.0	2.7	DGH207Q2R7	39	35.325	30x50	10	0
350.0	2.7	DGH357Q2R7	65	57.727	35x60	10	0