

DER

Radial Leaded Super Capacitors



FEATURES

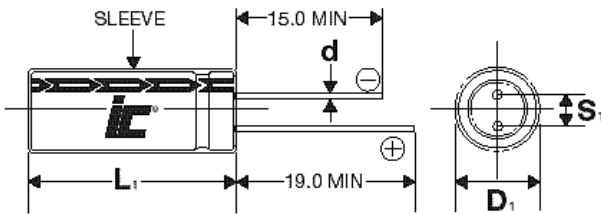
High Capacitance – Very fast charge/discharge – High power density

APPLICATIONS

Battery backup/ alternative – LED Displays – DC/DC converters – Pulse power

Operating Temperature Range		-25°C to +70°C	
Storage Temperature		-40°C to +70°C	
Capacitance Tolerance		+50%/-20% @ 25°C	
Voltage	WVDC	2.5	
	SVDC	2.7	
Maximum Current		See standard part listing	0.5*WVDC/(ESR_{DC}+(1/C))
Leakage Current		See standard part listing	72 hours, 25°C
1000 hours at rated voltage and 70°C			
Life time		Capacitance change	±30% of initially measured values
		ESR	≤200% of initially specified values
500,000 cycles			
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		Capacitance change	±30% of initially measured values
		ESR	≤200% of initially specified values

D= 8 to 18mm



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

L₁=L(<20mm +1.5mm) (≥20mm +2.0mm)
D₁=D(<20mm +0.5mm) (≥20mm +1.0mm)
S₁=S±0.5mm

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Sep-20

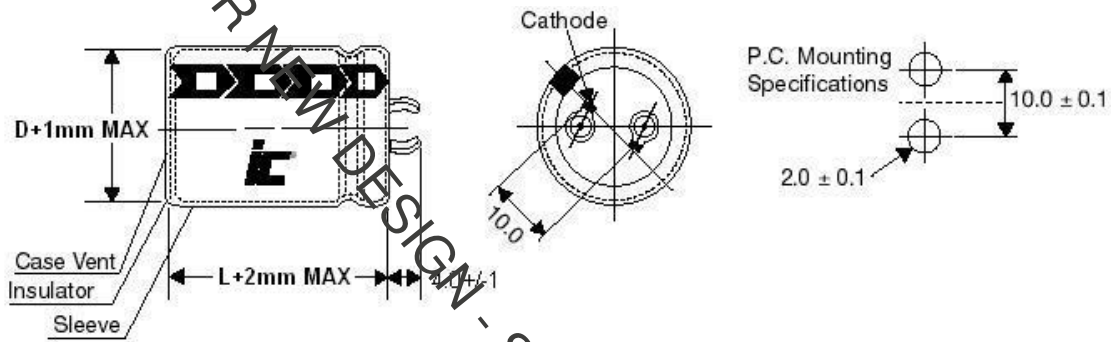
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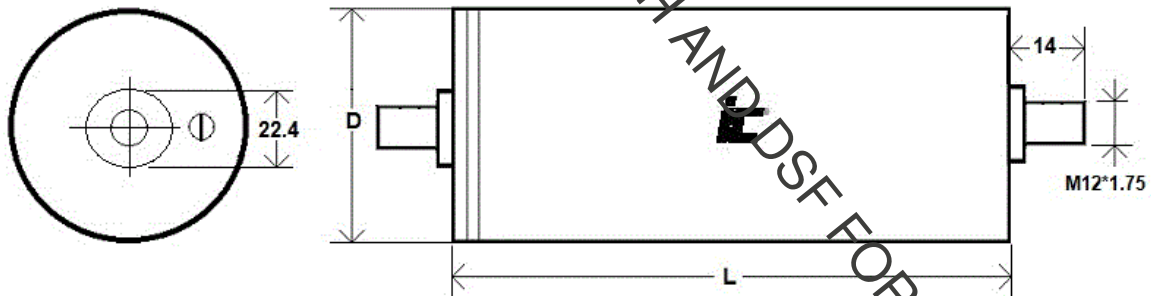


Snap in types

$$20\text{mm} \leq D < 60\text{mm}$$



Capacitance = 500F to 650F



NOT RECOMMENDED FOR NEW DESIGN

DER Radial lead, +70°C

WVDC	Capacitance (F)	IC PART NUMBER	MAX Current (A)	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)
2.5	1.0	106DER2R5SFN	0.63	500	1000	500	1000	0.868	0.008	1.0117	1.4391	0.8741	1.2434
2.5	2.0	205DER2R5SFQ	1.19	350	550	350	550	1.736	0.01	1.6001	2.1587	1.2568	1.6955
2.5	3.0	305DER2R5SFU	1.91	200	320	200	320	2.604	0.012	2.075	2.5904	1.8675	2.3314
2.5	3.3	335DER2R5SGU	2.01	200	320	200	320	2.865	0.014	1.3641	1.8237	1.1161	1.4921
2.5	4.7	475DER2R5SGU	2.49	180	290	180	290	4.08	0.016	1.7997	2.5973	1.1408	1.6464
2.5	7.0	705DER2R5SGV	3.44	140	220	140	220	6.076	0.02	2.3736	3.0947	1.3317	1.7362
2.5	10.0	106DER2R5SGV	5	100	150	100	150	8.681	0.03	2.7957	3.6841	1.6103	2.1221
2.5	10.0	106DER2R5STV	4.81	100	160	100	160	8.681	0.03	2.4887	2.8294	1.3439	1.5279
2.5	22.0	226DER2R5SKV	8.59	60	100	60	100	19.097	0.06	2.6639	3.7993	1.0462	1.4921
2.5	30.0	306DER2R5SKW	12.1	40	70	40	70	26.042	0.07	3.1486	4.3174	1.2954	1.7763
2.5	50.0	506DER2R5SLZ	17.8	30	50	30	50	43.403	0.16	3.061	4.2641	1.058	1.4737
2.5	100.0	107DER2R5SBG	27.8	25	35	25	35	86.806	0.3	4.4379	5.0746	1.0955	1.2527
2.5	100.0	107DER2R5SLB	27.8	25	35	25	35	86.806	0.3	4.1613	5.6854	1.0273	1.4035
2.5	150.0	157DER2R5SCP	34.1	22	30	22	30	130.207	0.55	3.8523	4.8229	0.7396	0.926
2.5	200.0	207DER2R5SDH	7.4	20	25	20	25	173.611	0.7	4.4075	4.9122	0.7616	0.8488
2.5	250.0	257DER2R5SDP	48.1	18	22	18	22	217.014	0.8	4.4977	5.582	0.7065	0.8769
2.5	350.0	357DER2R5SEZ	70	12	15	12	15	303.819	1	4.5818	5.2631	0.754	0.8661
2.5	500.0	507DER2R5SEW	89	10	12	10	12	434.028	1.3	3.7	4.7486	0.5328	0.6838
2.5	650.0	657DER2R5SZZ	502	0.8	0.95	0.8	0.95	564.236	2.3	2.5	3.326	3.498	4.6537

SEE DGH AND DSF FOR POSSIBLE REPLACEMENT

DER	Radial lead, +70°C
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WVDC	Capacitance (F)	IC PART NUMBER	Weight (grams)	Volume (mL)	Dims DxL (mm)	Lead Spacing S (mm)	Lead Diameter d (mm)
2.5	1.0	105DER2R5SFN	0.858	0.603	8x12	3.5	0.5
2.5	2.0	205DER2R5SFQ	1.085	0.804	8x16	3.5	0.5
2.5	3.0	305DER2R5SFU	1.255	1.005	8x20	3.5	0.6
2.5	3.3	335DER2R5SGU	2.1	1.571	10x20	5	0.6
2.5	4.7	475DER2R5SGU	2.267	1.571	10x20	5	0.6
2.5	7.0	705DER2R5SGV	2.56	1.963	10x25	5	0.6
2.5	10.0	106DER2R5SGW	3.105	2.356	10x30	5	0.6
2.5	10.0	106DER2R5STV	3.488	3.068	12.5x25	5	0.6
2.5	20.0	226DER2R5SKV	7.169	5.027	16x25	7.5	0.8
2.5	30.0	306DER2R5SKW	8.271	6.032	16x30	7.5	0.8
2.5	50.0	506DER2R5SLZ	13.01	10.179	18x40	7.5	0.8
2.5	100.0	107DER2R5SBG	19.56	17.106	22x45	10	0
2.5	100.0	108DER2R5SLB	20.86	15.268	18x60	7.5	7.5
2.5	150.0	157DER2R5SCP	33.8	26.998	25x55	10	0
2.5	200.0	207DER2R5SDH	39.39	35.343	30x50	10	1.5
2.5	250.0	257DER2R5SDP	48.25	38.877	30x55	10	1.5
2.5	350.0	357DER2R5SEZ	66.31	57.727	35x60	0	0
2.5	500.0	507DER2R5SEW	117.3	91.4	35x95	0	0
2.5	650.0	657DER2R5SZZ	225.7	169.65	60x60	0	0

NOT RECOMMENDED FOR NEW DESIGN / SEE DGH AND DSF FOR POSSIBLE REPLACEMENT