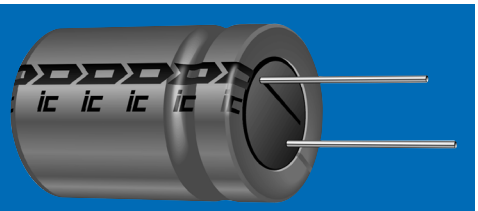
RLS

+85°C Low Leakage Radial Lead Aluminum Electrolytic Capacitors



For timing applications

FEATURES

- *Alternative to Tantalum Capacitors*
- *Low Leakage Current*
- *Capacitance Range: .1 µF to 1,000 µF*
- *Voltage Range: 10 WVDC to 50 WVDC*
- *Solvent Tolerant End Seals Standard*

SPECIFICATIONS

Capacitance Tolerance		**±20% at 120Hz, 25°C**					
Operating Temperature Range		**-40°C to +85°C**					
Dissipation Factor 120Hz, 25°C	**WVDC**	**10**	**16**	**25**	**35**	**50**	
	tan δ	.2	.16	.14	.12	.10	
Impedance Ratio (Max.) 120Hz	**WVDC**	**10**	**16**	**25**	**35**	**50**	
	-25°C/25°C	3	2	2	2	2	
	-40°C/25°C	6	4	4	3	3	
Leakage Current	**WVDC**	**≤ 50 WVDC**					
	Time	**2 minutes**					
		.002CV or .4µA whichever is greater					
Load Life		**2,000 hours, at 85°C with rated voltage**					
		Capacitance change Dissipation factor Leakage current			≤ 20% of initial measured value ≤ 200% of initial specified value ≤ initial specified value		
Shelf Life		1,000 hours at + 85°C with no voltage applied. Units will meet load life specification					

Ripple Current Multipliers

	Frequency (Hz)						Temperature (°C)			
Capacitance (µF)	50	120	400	1K	10K	100K	+85	+70	+60	+45
C ≤ 10	0.8	1.0	1.3	1.45	1.65	1.7	1.0	1.3	1.5	1.8
10 < C ≤ 100	0.8	1.0	1.23	1.36	1.48	1.53	1.0	1.3	1.5	1.8
100 < C ≤ 1000	0.8	1.0	1.16	1.25	1.35	1.38	1.0	1.3	1.5	1.8
C > 1000	0.8	1.0	1.11	1.17	1.25	1.28	1.0	1.3	1.5	1.8

SPECIAL ORDER OPTIONS

(See pages 33 thru 37)

• *Special tolerances: ±10% (K), -10% + 30% (Q)* • *Tape and Reel/Ammo-Pack* • *Cut, Formed, Cut and Formed, and Snap In Leads*

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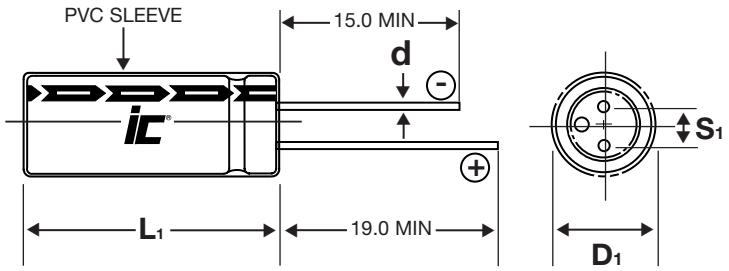
PHYSICAL DIMENSIONS

WVDC (SV) / (µF)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1	→	→	→	→	5x11
0.15	→	→	→	→	5x11
0.22	→	→	→	→	5x11
0.33	→	→	→	→	5x11
0.47	→	→	→	→	5x11
0.68	→	→	→	→	5x11
1	→	→	→	→	5x11
1.5	→	→	→	→	5x11
2.2	→	→	→	→	5x11
3.3	→	→	→	→	5x11
4.7	→	→	→	→	5x11
6.8	→	→	→	→	5x11
10	→	→	→	5x11	5x11
15	→	→	→	5x11	6.3x11
22	→	5x11	5x11	6.3x11	6.3x11
33	→	5x11	→	6.3x11	8x11.5
47	5x11	6.3x11	6.3x11	→	8x11.5
68	→	6.3x11	→	8x11.5	10x12.5
100	6.3x11	8x11.5	8x11.5	10x12.5	10x16
150	→	8x11.5	10x12.5	10x16	10x20
220	8x11.5	10x12.5	10x16	10x20	12.5x20
330	10x12.5	10x16	10x20	12.5x20	
470	10x16	10x20			
1000	12.5x20				

Convert to inches, divide by 25.4

DxL(mm)



NOTE: Case Vent is standard on all diameter ≥8.0mm

LEAD INFORMATION VS. CASE DIAMETER

D	5.0	6.3	8.0	10.0	12.5
S	2.0	2.5	3.5	5.0	5.0
d	0.5	0.5	0.6	0.6	0.6
B	0.5	0.5	0.5	0.5	0.8

D≤8.0, L_1= L+1.0 Max.
D>8.0, L_1= L+1.5 Max.
D_1= D+B Max.
S_1= S±.05mm Max.

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STANDARD PART LISTING

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR Ω 120Hz,+25°C	Maximum RMS Ripple Current (mA) 120Hz,+85°C	Dimensions DxL (mm)
0.1	50	**104RLS050M**	1657.86	6	5x11
0.15	50	**154RLS050M**	1105.243	7	5x11
0.22	50	**224RLS050M**	753.575	8	5x11
0.33	50	**334RLS050M**	502.383	9	5x11
0.47	50	**474RLS050M**	352.737	10	5x11
0.68	50	**684RLS050M**	243.804	10	5x11
1.0	50	**105RLS050M**	165.786	19	5x11
1.5	50	**155RLS050M**	110.524	28	5x11
2.2	50	**225RLS050M**	75.357	33	5x11
3.3	50	**335RLS050M**	50.238	38	5x11
4.7	50	**475RLS050M**	35.274	50	6.3x11
6.8	50	**685RLS050M**	24.380	63	5x11
10	35	**106RLS035M**	19.894	57	5x11
10	50	**106RLS050M**	16.579	80	5x11
15	35	**156RLS035M**	13.263	70	8x11
15	50	**156RLS050M**	11.052	110	6.3x11
22	16	**226RLS016M**	12.057	75	5x11
22	25	**226RLS025M**	10.550	81	5x11
22	35	**226RLS035M**	9.043	100	6.3x11
22	50	**226RLS050M**	7.536	140	6.3x11.5
33	16	**336RLS016M**	8.038	95	5x11
33	35	**336RLS035M**	6.029	120	6.3x11
33	50	**336RLS050M**	5.024	170	8x11.5
47	10	**476RLS010M**	7.055	105	5x11
47	16	**476RLS016M**	5.644	125	6.3x11
47	25	**476RLS025M**	4.938	136	6.3x11

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR Ω 120Hz,+25°C	Maximum RMS Ripple Current (mA) 120Hz,+85°C	Dimensions DxL (mm)
47	50	**476RLS050M**	3.527	230	8x11.5
68	16	**686RLS016M**	3.901	150	6.3x11
68	35	**686RLS035M**	2.926	200	8x11.5
68	50	**686RLS050M**	2.438	295	10x12.5
100	10	**107RLS010M**	3.316	160	6.3x11
100	16	**107RLS016M**	2.653	212	8x11.5
100	25	**107RLS025M**	2.321	220	8x11.5
100	35	**107RLS035M**	1.989	255	10x12.5
100	50	**107RLS050M**	1.658	400	10x16
150	16	**157RLS016M**	1.768	255	8x11.5
150	25	**157RLS025M**	1.547	265	10x12.5
150	35	**157RLS035M**	1.326	295	10x16
150	50	**157RLS050M**	1.105	450	10x20
220	10	**227RLS010M**	1.507	274	8x11.5
220	16	**227RLS016M**	1.206	322	10x12.5
220	25	**227RLS025M**	1.055	375	10x16
220	35	**227RLS035M**	0.904	442	10x20
220	50	**227RLS050M**	0.754	550	12.5x20
330	10	**337RLS010M**	1.005	355	10x12.5
330	16	**337RLS016M**	0.804	425	10x16
330	25	**337RLS025M**	0.703	500	10x20
330	35	**337RLS035M**	0.603	595	12.5x20
470	10	**477RLS010M**	0.705	460	10x16
470	16	**477RLS016M**	0.564	505	10x20
1000	10	**108RLS010M**	0.332	805	12.5x20