

RLS

**+ 85°C Low Leakage
Radial Lead Aluminum
Electrolytic Capacitors**



For timing applications

FEATURES

- *Alternative to Tantalum Capacitors*
- *Low Leakage Current*
- *Capacitance Range: .1 μ F to 1000 μ F*
- *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 7 thru 11)

- Special tolerances: $\pm 10\%$ (K), -10% + 30% (Q)
- Tape and Reel/Ammo Pack
- Cut, Formed, Cut and Formed, and Snap In Leads
- Epoxy end seal
- Polyester sleeve



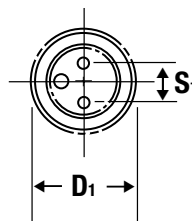
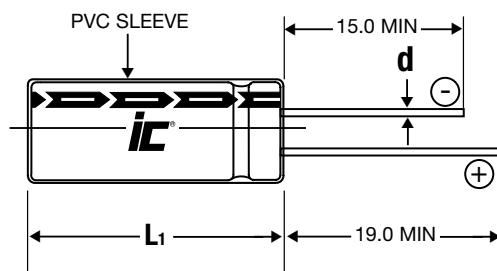
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PHYSICAL DIMENSIONS

WVDC (μ F)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1				→	5x11
.15				→	5x11
.22				→	5x11
.33				→	5x11
.47				→	5x11
.68				→	5x11
1.0				→	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			
1,000	12.5x20				

Convert to inches, divide by 25.4

DxL(mm)



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, L₁=L+1.0 Max.
D>8.0, L₁=L+1.5 Max.
D₁=D+B Max.
S₁=S±.05mm Max.

NOTE: Case Vent is standard on all diameter 8.0mm

STANDARD PART LISTING

Capacitance (μ F)	WVDC	ic [®] PART NUMBER	Maximum ESR 120Hz, +25°C	Maximum RMS Ripple Current (mA) 120Hz, +85°C	Dimensions DxL (mm)
0.1	50	104RLS050M	1,320	2	5x11
0.15	50	154RLS050M	884	2	5x11
0.22	50	224RLS050M	600	3	5x11
0.33	50	334RLS050M	400	4	5x11
0.47	50	474RLS050M	280	6	5x11
0.68	50	684RLS050M	194	8	5x11
1.0	50	105RLS050M	130	12	5x11
1.5	50	155RLS050M	88	18	5x11
2.2	50	225RLS050M	60	25	5x11
3.3	50	335RLS050M	40	38	5x11
4.7	50	475RLS050M	28	50	5x11
6.8	50	685RLS050M	19	53	5x11
10	35	106RLS035M	16	60	5x11
10	50	106RLS050M	13	65	5x11
15	35	156RLS035M	11	70	5x11
15	50	156RLS050M	8.8	88	6.3x11
22	16	226RLS016M	9.6	80	5x11
22	25	226RLS025M	8.4	85	5x11
22	35	226RLS035M	7.2	100	6.3x11
22	50	226RLS050M	6.0	110	6.3x11
33	16	336RLS016M	6.4	95	5x11
33	35	336RLS035M	4.8	120	6.3x11
33	50	336RLS050M	4.0	150	8x11.5
47	10	476RLS010M	5.6	105	5x11
47	16	476RLS016M	4.5	125	6.3x11
47	25	476RLS025M	3.9	136	6.3x11

NOTE 1: WVDC: MAXIMUM RATED DC WORKING VOLTAGE AT +85°C.
NOTE 2: SVDC: MAXIMUM RATED DC SURGE VOLTAGE AT +85°C.
NOTE 3: DISSIPATION FACTOR ($\tan \delta$) MAXIMUM; 120 Hz, +25°C.
NOTE 4: ESR: MAXIMUM EQUIVALENT SERIES RESISTANCE; 120 Hz, +25°C MINIMUM CAPACITANCE, MAXIMUM DISSIPATION FACTOR.

Capacitance (μ F)	WVDC	ic [®] PART NUMBER	Maximum ESR 120Hz, +25°C	Maximum RMS Ripple Current (mA) 120Hz, +85°C	Dimensions DxL (mm)
47	50	476RLS050M	2.8	188	8x11.5
68	16	686RLS016M	3.0	150	6.3x11
68	35	686RLS035M	2.3	195	8x11.5
68	50	686RLS050M	1.9	230	10x12.5
100	10	107RLS010M	2.6	160	6.3x11
100	16	107RLS016M	2.1	212	8x11.5
100	25	107RLS025M	1.8	224	8x11.5
100	35	107RLS035M	1.6	262	10x12.5
100	50	107RLS050M	1.3	306	10x16
150	16	157RLS016M	1.4	255	8x11.5
150	25	157RLS025M	1.2	286	10x12.5
150	35	157RLS035M	1.1	338	10x16
150	50	157RLS050M	.88	400	10x20
220	10	227RLS010M	1.2	274	8x11.5
220	16	227RLS016M	.9	328	10x12.5
220	25	227RLS025M	.84	380	10x16
220	35	227RLS035M	.72	442	10x20
220	50	227RLS050M	.60	550	12.5x20
330	10	337RLS010M	.80	355	10x12.5
330	16	337RLS016M	.64	434	10x16
330	25	337RLS025M	.56	508	10x20
330	35	337RLS035M	.48	605	12.5x20
470	10	477RLS010M	.56	460	10x16
470	16	477RLS016M	.45	505	10x20
1,000	10	108RLS010M	.26	820	12.5x20

NOTE 5: MAXIMUM LEAKAGE CURRENT; RATED WVDC, 2 MINUTES, +25°C.
NOTE 6: RMS RIPPLE CURRENT; 120 Hz, +85°C.
NOTE 7: CAPACITANCE TOLERANCE IS MEASURED AT 120 Hz, +25°C.
NOTE 8: ALL MEASUREMENTS ARE PERFORMED USING THE BRIDGE METHOD.