

RLR

LOW LEAKAGE RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITORS

SPECIFICATIONS

Capacitance Range:

0.1 Mfd. to 2,200 Mfd.

Voltage Range:

6.3WVDC to 50WVDC

Capacitance Tolerance:

±20% (M) Standard

±10% (K) Optional

Leakage Current:

≤0.002 CV or 0.4μA min.

Operating Temperature:

-40°C to +85°C

Storage Temperature:

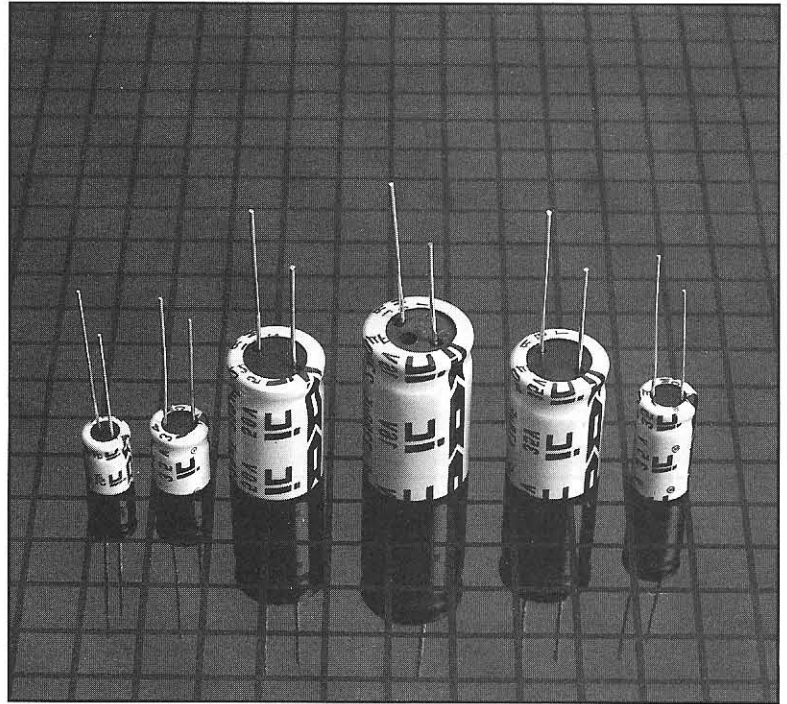
-55°C to +85°C

Solvent Tolerant Seal:

Standard

SPECIAL ORDER OPTIONS

- Epoxy End Seal
- Tape & Reel
- Tape—Ammo (flat) pack
- Polyester Sleeve
- Cut Leads
- Special Tolerances: ±10% (K)



APPLICATIONS

ic type RLR Low Leakage Aluminum Electrolytic Capacitors are designed for use in timing circuits and can be used in many applications as an alternate to tantalum. Featuring stable performance and long operating life over the temperature range of +85°C to -40°C, type RLR is the design standard for high performance circuits at a moderate cost. Perfect for low level audio circuits, type RLR construction will decrease microphonics susceptibility. Additional applications include, avionics, computers instrumentation, telemetry and telecommunications. Functions include coupling, decoupling, timing, bypass and as a charge storage device in special low current applications.

**ENVIRONMENTAL PERFORMANCE
AND ENDURANCE TEST RATE
GRAPHS ON PAGES 69-70**

ic[®]
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Low Leakage Radial Aluminum Electrolytic Capacitors

STANDARD PART LISTING

STANDARD PART LISTING: Tolerance $\pm 20\%$ (M) Standard

PART NUMBER	Capacitance MFD.	VVDC (SVDC)	Maximum Dissipation Factor (tan δ) 120Hz, +25°C	Maximum ESR Ω 120Hz, +25°C	Leakage Current (μ A) @2min, +25°C	RMS Ripple Current (mA) 120Hz, +85°C	PHYSICAL DIMENSIONS in/mm			
							Case Diameter	Case Length	Lead Spacing	Lead Thickness
104RLR050M	0.1	50(63)	.10	1,327	.4	8	.197 5.0	.433 11.0	.079 2.0	.020 0.5
154RLR050M	0.15	50(63)	.10	884	.4	10	.197 5.0	.433 11.0	.079 2.0	.020 0.5
224RLR050M	0.22	50(63)	.10	603	.4	15	.197 5.0	.433 11.0	.079 2.0	.020 0.5
334RLR050M	0.33	50(63)	.10	402	.4	20	.197 5.0	.433 11.0	.079 2.0	.020 0.5
474RLR050M	0.47	50(63)	.10	282	.4	24	.197 5.0	.433 11.0	.079 2.0	.020 0.5
684RLR050M	0.68	50(63)	.10	195	.4	27	.197 5.0	.433 11.0	.079 2.0	.020 0.5
105RLR050M	1.0	50(63)	.10	132	.4	29	.197 5.0	.433 11.0	.079 2.0	.020 0.5
155RLR050M	1.5	50(63)	.10	88	.4	34	.197 5.0	.433 11.0	.079 2.0	.020 0.5
225RLR050M	2.2	50(63)	.10	60	.4	44	.197 5.0	.433 11.0	.079 2.0	.020 0.5
335RLR050M	3.3	50(63)	.10	40	.4	65	.197 5.0	.433 11.0	.079 2.0	.020 0.5
475RLR035M	4.7	35(44)	.12	34	.4	70	.197 5.0	.433 11.0	.079 2.0	.020 0.5
475RLR050M	4.7	50(63)	.10	28	.47	80	.248 6.3	.433 11.0	.098 2.5	.020 0.5
685RLR035M	6.8	35(44)	.12	23	.48	86	.197 5.0	.433 11.0	.079 2.0	.020 0.5
685RLR050M	6.8	50(63)	.10	19	.68	95	.248 6.3	.433 11.0	.098 2.5	.020 0.5
106RLR016M	10	16(20)	.17	23	.4	75	.197 5.0	.433 11.0	.079 2.0	.020 0.5
106RLR035M	10	35(44)	.12	16	.70	105	.248 6.3	.433 11.0	.098 2.5	.020 0.5
106RLR050M	10	50(63)	.10	13	1.0	125	.315 8.0	.453 11.5	.138 3.5	.024 0.6
156RLR016M	15	16(20)	.17	15	.48	95	.197 5.0	.433 11.0	.079 2.0	.020 0.5
156RLR035M	15	35(44)	.12	11	1.0	135	.248 6.3	.433 11.0	.098 2.5	.020 0.5
156RLR050M	15	50(63)	.10	8.8	1.5	150	.315 8.0	.453 11.5	.138 3.5	.024 0.6
226RLR010M	22	10(13)	.20	12	.44	105	.197 5.0	.433 11.0	.079 2.0	.020 0.5
226RLR016M	22	16(20)	.17	10	.70	120	.248 6.3	.433 11.0	.098 2.5	.020 0.5
226RLR035M	22	35(44)	.12	7.2	1.5	165	.315 8.0	.433 11.5	.138 3.5	.024 0.6
226RLR050M	22	50(63)	.10	6.0	2.2	185	.394 10	.492 12.5	.197 5.0	.024 0.6
336RLR016M	33	16(20)	.17	6.8	1.1	150	.248 6.3	.433 11.0	.098 2.5	.020 0.5
336RLR025M	33	25(32)	.17	6.8	1.6	175	.315 8.0	.453 11.5	.138 3.5	.024 0.6
336RLR035M	33	35(44)	.12	4.8	2.3	205	.394 10	.492 12.5	.197 5.0	.024 0.6
336RLR050M	33	50(63)	.10	4.0	3.3	230	.394 10	.630 16.0	.197 5.0	.024 0.6



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Low Leakage Radial Aluminum Electrolytic Capacitors STANDARD PART LISTING

STANDARD PART LISTING: Tolerance $\pm 20\%$ (M) Standard (Continued)

ic PART NUMBER	Capacitance MFD.	WVDC (SVDC)	Maximum Dissipation Factor (tan δ) 120Hz, +25°C	Maximum ESR Ω 120Hz, +25°C	Leakage Current (μ A) @ 2min, +25°C	RMS Ripple Current (mA) 120Hz, +85°C	PHYSICAL DIMENSIONS in/mm			
							Case Diameter	Case Length	Lead Spacing	Lead Thickness
476RLR010M	47	10(13)	.20	5.6	.94	165	.248 6.3	.433 11.0	.098 2.5	.020 0.5
476RLR016M	47	16(20)	.17	4.8	1.5	185	.315 8.0	.453 11.5	.138 3.5	.024 0.6
476RLR035M	47	35(44)	.12	3.4	3.3	245	.394 10	.492 12.5	.197 5.0	.024 0.6
476RLR050M	47	50(63)	.10	2.8	4.7	275	.394 10	.630 16.0	.197 5.0	.024 0.6
686RLR010M	68	10(13)	.20	3.9	1.4	205	.248 6.3	.433 11.0	.098 2.5	.020 0.5
686RLR016M	68	16(20)	.17	3.3	2.2	220	.315 8.0	.453 11.5	.138 3.5	.024 0.6
686RLR025M	68	25(32)	.17	3.3	3.4	255	.394 10	.492 12.5	.197 5.0	.024 0.6
686RLR035M	68	35(44)	.12	2.3	4.7	295	.394 10	.630 16.0	.197 5.0	.024 0.6
686RLR050M	68	50(63)	.10	1.9	6.8	345	.394 10	.787 20.0	.197 5.0	.024 0.6
107RLR010M	100	10(13)	.20	2.6	2.0	245	.315 8.0	.492 11.5	.138 3.5	.024 0.6
107RLR016M	100	16(20)	.17	2.2	3.2	275	.394 10	.492 12.5	.197 5.0	.024 0.6
107RLR025M	100	25(32)	.17	2.2	5.0	315	.394 10	.630 16.0	.197 5.0	.024 0.6
107RLR035M	100	35(44)	.12	1.6	7.0	365	.394 10	.787 20.0	.197 5.0	.024 0.6
107RLR050M	100	50(63)	.10	1.3	10	420	.492 12.5	.787 20.0	.197 5.0	.024 0.6
157RLR6R3M	150	6.3(8)	.22	1.9	1.9	255	.315 8.0	.453 11.5	.138 3.5	.024 0.6
157RLR010M	150	10(13)	.20	1.8	3.0	305	.394 10	.492 12.5	.197 5.0	.024 0.6
157RLR016M	150	16(20)	.17	1.5	4.8	340	.394 10	.630 16.0	.197 5.0	.024 0.6
157RLR025M	150	25(32)	.17	1.5	7.5	395	.394 10	.787 20.0	.197 5.0	.024 0.6
157RLR035M	150	35(44)	.12	1.1	11	460	.492 12.5	.787 20.0	.197 5.0	.024 0.6
157RLR050M	150	50(63)	.10	.88	15	520	.492 12.5	.984 25.0	.197 5.0	.024 0.6
227RLR6R3M	220	6.3(8)	.22	1.3	2.7	355	.394 10	.492 12.5	.197 5.0	.024 0.6
227RLR010M	220	10(13)	.20	1.2	4.4	380	.394 10	.630 16.0	.197 5.0	.024 0.6
227RLR016M	220	16(20)	.17	1.0	7.0	420	.394 10	.630 16.0	.197 5.0	.024 0.6
227RLR025M	220	25(32)	.17	1.0	11	490	.492 12.5	.787 20.0	.197 5.0	.024 0.6
227RLR035M	220	35(44)	.12	.72	15	560	.492 12.5	.984 25.0	.197 5.0	.024 0.6
227RLR050M	220	50(63)	.10	.60	22	650	.630 16	.984 25.0	.295 7.5	.024 0.6



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STANDARD PART LISTING

STANDARD PART LISTING: Tolerance $\pm 20\%(M)$ Standard (Continued)

PART NUMBER	Capacitance MFD.	WVDC (SVDC)	Maximum Dissipation Factor (tan δ) 120Hz, +25°C	Maximum ESR Ω 120Hz, +25°C	Leakage Current (μ A) @ 2min, +25°C	RMS Ripple Current (mA) 120Hz, +85°C	PHYSICAL DIMENSIONS in/mm			
							Case Diameter	Case Length	Lead Spacing	Lead Thickness
337RLR6R3M	330	6.3(8)	.22	.89	4.2	445	.394 10	.630 16.0	.197 5.0	.024 0.6
337RLR016M	330	16(20)	.17	.68	11	520	.394 10	.787 20.0	.197 5.0	.024 0.6
337RLR025M	330	25(32)	.17	.68	16	600	.492 12.5	.787 25.0	.197 5.0	.024 0.6
337RLR035M	330	35(44)	.12	.48	23	710	.630 16	.984 25.0	.295 7.5	.032 0.8
337RLR050M	330	50(63)	.10	.40	33	820	.360 16	1.240 31.5	.295 7.5	.032 0.8
477RLR6R3M	470	6.3(8)	.22	.62	5.9	530	.394 10	.787 20.0	.197 5.0	.024 0.6
477RLR016M	470	16(20)	.17	.47	15	620	.492 12.5	.787 20.0	.197 5.0	.024 0.6
477RLR025M	470	25(32)	.17	.47	23	740	.630 16	.984 25.0	.295 7.5	.032 0.8
477RLR035M	470	35(44)	.12	.34	33	850	.630 16	.984 25.0	.295 7.5	.032 0.8
477RLR050M	470	50(63)	.10	.28	47	880	.630 16.0	1.240 31.5	.295 7.5	.032 0.8
687RLR6R3M	680	6.3(8)	.22	.43	8.6	680	.394 10	.787 20.0	.197 5.0	.024 0.6
687RLR010M	680	10(13)	.20	.39	13	710	.492 12.5	.787 20.0	.197 5.0	.024 0.6
687RLR016M	680	16(20)	.17	.33	22	760	.492 12.5	.984 25.0	.197 5.0	.024 0.6
687RLR025M	680	25(32)	.17	.33	34	930	.630 16.0	.984 25.0	.295 7.5	.032 0.8
687RLR035M	680	35(44)	.12	.23	47	980	.630 16.0	1.240 31.5	.295 7.5	.032 0.8
108RLR010M	1,000	10(13)	.20	.26	20	850	.492 12.5	.787 20.0	.197 5.0	.024 0.6
108RLR016M	1,000	16(20)	.17	.22	32	950	.630 16.0	.984 25.0	.295 7.5	.032 0.8
108RLR025M	1,000	25(32)	.17	.22	50	1,120	.630 16.0	1.240 31.5	.295 7.5	.032 0.8
108RLR035M	1,000	35(44)	.12	.16	70	1,320	.709 18.0	1.398 35.5	.295 7.5	.032 0.8
158RLR6R3M	1,500	6.3(8)	.24	.21	19	950	.492 12.5	.984 25.0	.197 5.0	.024 0.6
158RLR010M	1,500	10(13)	.20	.19	30	1,020	.630 16.0	.984 25.0	.295 7.5	.032 0.8
158RLR016M	1,500	16(20)	.17	.17	48	1,080	.630 16.0	1.240 31.5	.295 7.5	.032 0.8
228RLR6R3M	2,200	6.3(8)	.26	.16	27	1,240	.630 16.0	.984 25.0	.295 7.5	.032 0.8
228RLR010M	2,200	10(13)	.20	.14	44	1,330	.630 16.0	1.240 31.5	.295 7.5	.032 0.8
228RLR016M	2,200	16(20)	.17	.13	70	1,510	.709 18.0	1.398 35.5	.295 7.5	.032 0.8

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 δ) Maximum; 120Hz, +25°C.

Note 4: ESR: Maximum Equivalent Series Resistance; 120Hz, +25°C nominal capacitance, maximum dissipation factor.

Note 5: Maximum Leakage Current; Rated WVDC, 2 Minutes, +25°C.

Note 6: RMS Ripple Current; 120Hz, +85°C.

Note 7: Capacitance Tolerance is measured at 120Hz, +25°C

Note 8: All measurements are performed using the bridge method.



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