

ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

- ULTRA. Low impedance at 100kHz
- Load life:105°C 4000~10000 hours
- HIGH QUALITY

SPECIFICATIONS

Item	Performance Characteristics								
Operating Temperature Range	-40°C~105°C								
Rated Voltage Range	6.3~63W.V.								
Capacitance Range	6.8~18000uF								
Capacitance Tolerance	±20%, 120Hz, 20°C								
Leakage Current (MAX)	I=0.01CV or 3uA whichever is greater.(after 2 minutes) I=Leakage Current(uA), C=Nominal Capacitance(uF), V=Rated Voltage(V)								
Dissipation Factor (tan δ)	When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with increase of every 1000uF,								
	Rated voltage (V)	6.3	10	16	25	35	50	63	MAX (20°C 120Hz)
	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	
Low Temperature Stability Impedance Ratio	Rated Voltage(V)	6.3	10	16	25	35	50	63	MAX (120Hz)
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	
	Z(-55°C)/Z(+20°C)	8	6	4	3	3	3	3	
Load Life	After life test at conditions stated in the table below, the capacitors shall meet the following requirement								
	Leakage Current	Not more than the specified value			Case Dia	Life Time(hrs)			
						6.3~10WV	16~63WV		
	Capacitance Change	Within ±25% of initial value.			φ D ≤ 6.3	4000		5000	
						6000		7000	
Dissipation Factor	Not more than 200% of the specified value			Φ D ≥ 12.5	8000		10000		
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours and applying voltage according to JIS C-5102 4-3, they meet the specified value for load life characteristics listed above.								
Standard	According to JIS C 5141								

MULTIPLIER FOR RIPPLE CURRENT

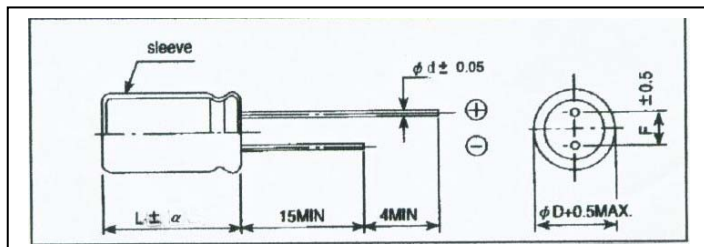
Temperature coefficient

Frequency(Hz) Cap(uF)	120	1k	10k	≥ 100k
6.8-33	0.42	0.70	0.90	1.00
39-270	0.50	0.73	0.92	1.00
330-680	0.55	0.77	0.94	1.00
820-1800	0.60	0.80	0.96	1.00
2200-18000	0.70	0.85	0.98	1.00

ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

DIMENSIONS (mm)



ϕD	5	6.3	8	10	12.5	16	18
ϕd	0.5		0.6			0.8	
F	2.0	2.5	3.5	5.0		7.5	
α	$L \leq 16: \alpha = 1.5, L \geq 20: \alpha = 2.0$						

STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 6.3V (0J)				
Nominal capacitance (uF)	Size $\phi D \times L$ (mm)	Ripple Current	Impedance (Ω MAX)	
			20°C, 100kHz	-10°C, 100kHz
150	5 x 11	210	0.58	2.262
330	6.3 x 11	340	0.22	0.858
680	8 x 11.5	640	0.13	0.507
820	10 x 12.5	865	0.080	0.312
1000	8 x 16	840	0.087	0.339
1200	8 X 20	1050	0.069	0.269
1200	10 X 16	1210	0.060	0.234
1500	10 X 20	1400	0.046	0.179
1800	12.5 X 16	1450	0.049	0.171
2200	10 X 23	1650	0.042	0.163
2700	10 X 28	1910	0.031	0.120
	16 x 16	1940	0.042	0.126
3300	12.5 x 20	1900	0.035	0.122
3900	12.5 x 25	2230	0.027	0.094
	18 x 16	2210	0.043	0.129
4700	12.5 x 30	2650	0.024	0.084
5600	12.5 x 35	2880	0.020	0.070
	16 x 20	2530	0.027	0.081
6800	12.5 x 40	3350	0.017	0.059
	16 x 25	2930	0.021	0.063
	18 x 20	2860	0.026	0.078
8200	16 x 31.5	3450	0.017	0.051
10000	16 x 35.5	3610	0.015	0.045
	18 x 25	3140	0.019	0.057
12000	16 x 40	4080	0.013	0.039
	18 x 31.5	4170	0.015	0.045
15000	18 x 35.5	4220	0.014	0.042
18000	18 x 40	4280	0.012	0.036



ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 10V (1A)				
Nominal capacitance (uF)	Size	Ripple Current	Impedance (Ω MAX)	
	\varnothing D x L (mm)		20°C, 100kHz	-10°C, 100kHz
100	5 x11	210	0.58	2.262
220	6.3 x11	340	0.22	0.858
470	8 x11.5	640	0.13	0.507
680	8 X16	840	0.087	0.339
680	10 X12.5	865	0.080	0.312
1000	8 X20	1050	0.069	0.269
	10 x16	1210	0.060	0.234
1200	10 X20	1400	0.046	0.179
1500	10 X23	1650	0.042	0.163
1500	12.5 X16	1450	0.049	0.171
2200	10 X28	1910	0.031	0.121
2200	12.5 X20	1900	0.035	0.122
2200	16 X16	1940	0.042	0.126
2700	18 X16	2210	0.043	0.129
3300	12.5 x25	2230	0.027	0.094
3900	12.5 x30	2650	0.024	0.084
	16 X20	2530	0.027	0.081
4700	12.5 x35	2880	0.020	0.070
5600	12.5 X40	3350	0.017	0.059
5600	16 X25	2930	0.021	0.063
5600	18 X20	2860	0.026	0.078
6800	16 x31.5	3450	0.017	0.051
	18 x25	3140	0.019	0.057
8200	16 x35.5	3610	0.015	0.045
	18 x31.5	4170	0.015	0.045
10000	16 x40	4080	0.013	0.039
	18 x35.5	4220	0.014	0.042
12000	18 x40	4280	0.012	0.036



ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 16V (1C)				
Nominal capacitance (uF)	Size	Ripple Current	Impedance (Ω MAX)	
	φ DxL(mm)		20°C, 100kHz	-10°C, 100kHz
56	5 x11	210	0.58	2.262
120	6.3 x11	340	0.22	0.858
330	8 x11.5	640	0.13	0.507
470	8 X16	840	0.087	0.339
	10 x12.5	865	0.080	0.312
680	8 X20	1050	0.069	0.269
	10 x16	1210	0.060	0.234
1000	10 x20	1400	0.046	0.179
	12.5 x16	1450	0.049	0.171
1200	10 X23	1650	0.042	0.163
1500	10 x28	1910	0.031	0.120
	12.5 x20	1900	0.035	0.122
	16 x16	1940	0.042	0.126
2200	12.5 x25	2230	0.027	0.094
	18 x16	2210	0.043	0.129
2700	12.5 x30	2650	0.024	0.084
	16 x20	2530	0.027	0.081
3300	12.5 x35	2880	0.020	0.070
3900	12.5 X40	3350	0.017	0.059
	16 x25	2930	0.021	0.063
	18 x20	2860	0.026	0.078
4700	16 x31.5	3450	0.017	0.051
	18 x25	3140	0.019	0.057
5600	16 x35.5	3610	0.015	0.045
	18 x31.5	4170	0.015	0.045
6800	16 x40	4080	0.013	0.039
8200	18 x35.5	4220	0.014	0.042
10000	18 x40	4280	0.012	0.036



ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 25V (1E)				
Nominal capacitance (μF)	Size	Ripple Current	Impedance (Ω MAX)	
	φ D×L(mm)		20°C, 100kHz	-10°C, 100kHz
47	5 ×11	210	0.58	2.262
100	6.3 ×11	340	0.22	0.858
220	8 ×11.5	640	0.13	0.507
330	8 ×16	840	0.087	0.339
	10 X12.5	865	0.080	0.312
470	8 ×20	1050	0.069	0.269
	10 ×16	1210	0.060	0.234
680	10 ×20	1400	0.046	0.179
	12.5 ×16	1450	0.049	0.171
820	10 ×23	1650	0.042	0.163
1000	10 X28	1910	0.031	0.121
	12.5 ×20	1900	0.035	0.122
	16 ×16	1940	0.042	0.126
1200	18 X16	2210	0.043	0.129
1500	12.5 ×25	2230	0.027	0.094
1800	12.5 ×30	2650	0.024	0.084
	16 ×20	2530	0.027	0.081
2200	12.5 ×35	2880	0.020	0.070
	18 ×20	2860	0.026	0.078
2700	12.5 ×40	3350	0.017	0.059
	16 ×25	2930	0.021	0.063
3300	16 X31.5	3450	0.017	0.051
	18 ×25	3140	0.019	0.057
3900	16 X35.5	3610	0.015	0.045
	18 ×31.5	4170	0.015	0.045
4700	16 ×40	4080	0.013	0.039
	18 ×35.5	4220	0.014	0.042
5600	18 ×40	4280	0.012	0.036

ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 35V (1V)				
Nominal capacitance (uF)	Size	Ripple Current	Impedance (Ω MAX)	
	φ D×L(mm)		20°C, 100kHz	-10°C, 100kHz
33	5 ×11	210	0.58	2.262
56	6.3 ×11	340	0.22	0.858
150	8 ×11.5	640	0.13	0.507
220	8 ×16	840	0.087	0.339
	10 X12.5	865	0.080	0.312
270	8 X20	1050	0.069	0.269
330	10 ×16	1210	0.060	0.234
470	10 X20	1400	0.046	0.179
	12.5 ×16	1450	0.049	0.171
560	10 X23	1650	0.042	0.163
680	10 X28	1910	0.031	0.121
	12.5 ×20	1900	0.035	0.122
	16 ×16	1940	0.042	0.126
1000	12.5 ×25	2230	0.027	0.094
	18 ×16	2210	0.043	0.129
1200	12.5 ×30	2650	0.024	0.084
	16 ×20	2530	0.027	0.081
1500	12.5 ×35	2880	0.020	0.070
1800	12.5 X40	3350	0.017	0.059
	16 ×25	2930	0.021	0.063
	18 ×20	2860	0.026	0.078
2200	16 X31.5	3450	0.017	0.051
	18 ×25	3140	0.019	0.057
2700	16 ×35.5	3610	0.015	0.045
	18 ×31.5	4170	0.015	0.045
3300	16 ×40	4080	0.013	0.039
	18 ×35.5	4220	0.014	0.042
3900	18 ×40	4280	0.012	0.036

ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 50V (1H)				
Nominal capacitance (uF)	Size	Ripple Current	Impedance (Ω MAX)	
	φ D xL(mm)		20°C, 100kHz	-10°C, 100kHz
22	5 x11	180	0.70	2.73
56	6.3 x11	295	0.30	1.17
100	8 X11.5	555	0.17	0.663
120	8 X16	730	0.12	0.468
150	10 X12.5	760	0.12	0.468
180	8 x20	910	0.091	0.354
220	10 x16	1050	0.084	0.327
270	10 X20	1220	0.060	0.234
	12.5 x16	1260	0.061	0.213
330	10 x23	1440	0.055	0.214
470	10 x28	1690	0.043	0.167
	12.5 x20	1660	0.045	0.157
	16 x16	1690	0.055	0.165
560	12.5 x25	1950	0.034	0.119
	18 x16	1930	0.054	0.162
680	12.5 x30	2310	0.030	0.105
820	12.5 x35	2510	0.025	0.087
	16 x20	2210	0.034	0.102
1000	12.5 X40	2920	0.021	0.073
	16 x25	2555	0.025	0.075
	18 x20	2490	0.036	0.108
1200	16 X31.5	3010	0.022	0.066
	18 X25	2740	0.026	0.078
1500	16 X35.5	3150	0.019	0.057
1800	16 X40	3710	0.016	0.048
	18 X31.5	3635	0.021	0.063
2200	18 X35.5	3680	0.017	0.051
2700	18 x40	3800	0.014	0.042



ALUMINUM ELECTROLYTIC CAPACITORS

LZR series ULTRAL LOW IMPEDANCE, HIGH RELIABILITY

Ripple Current (mA 105°C, 100kHz) r.m.s

Rated voltage 63V (1J)				
Nominal capacitance (uF)	Size	Ripple Current	Impedance (Ω MAX)	
	φ DxL(mm)		20°C, 100kHz	-10°C, 100kHz
15	5 x11	62	1.8	7.02
33	6.3 x11	126	1.0	3.90
56	8 x11.5	260	0.50	1.950
82	8 x16	335	0.36	1.404
	10 x12.5	325	0.34	1.326
120	8 x20	408	0.26	1.014
	10 x16	400	0.25	0.975
180	10 x20	518	0.17	0.663
	12.5 x16	527	0.18	0.630
220	10 X23	595	0.16	0.624
270	10 X28	740	0.12	0.468
	12.5 x20	765	0.13	0.455
	16 x16	895	0.11	0.330
330	12.5 x25	875	0.096	0.336
390	18 x16	1030	0.096	0.288
470	12.5 x35	1010	0.080	0.280
	16 X20	1130	0.077	0.231
560	12.5 X35	1140	0.070	0.245
	16 x25	1350	0.062	0.186
680	12.5 x40	1280	0.060	0.210
	18 x20	1300	0.072	0.216
820	16 x31.5	1650	0.049	0.147
	18 x25	1560	0.052	0.156
1000	16 X35.5	1900	0.040	0.120
	18 X31.5	1720	0.042	0.126
1200	16 X40	2130	0.036	0.108
	18 X35.5	1890	0.036	0.108
1500	18 x40	2470	0.032	0.096