



# RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITORS

# ZLJ

**ZLJ** SERIES

UPGRADE

105°C High Ripple Current, Long Life, Low Impedance

• Load Life : 105°C 6000~10000 hours.

RoHS Compliance



### ◆ SPECIFICATIONS

Item	Characteristics																																																										
Category Temperature Range	-40~+105°C																																																										
Rated Voltage Range	6.3~100Vdc																																																										
Capacitance Tolerance	±20% (20°C, 120Hz)																																																										
Leakage Current (MAX)	I=0.01CV or 3 μ A whichever is greater. (After 2 minutes) I=Leakage Current (μ A) C=Capacitance (μ F) V=Rated Voltage (Vdc)																																																										
Dissipation Factor (MAX)	<table border="1"> <thead> <tr> <th>(Vdc) Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> <td></td> </tr> </tbody> </table> <p>When capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.</p>	(Vdc) Rated Voltage	6.3	10	16	25	35	50	63	80	100	(20°C, 120Hz)	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08																																					
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Endurance	<p>After applying rated voltage with rated ripple current for specified time at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <thead> <tr> <th rowspan="2">Capacitance Change</th> <th rowspan="2">Within ±25% of the initial value. (6.3Vdc, 10Vdc: ±30%)</th> <th rowspan="2">Dissipation Factor</th> <th rowspan="2">Not more than 200% of the specified value.</th> <th rowspan="2">Leakage Current</th> <th rowspan="2">Not more than the specified value.</th> <th colspan="3">Life Time (hrs)</th> </tr> <tr> <th>Case Size</th> <th>6.3Vdc</th> <th>10~50Vdc</th> <th>63~100Vdc</th> </tr> </thead> <tbody> <tr> <td>φD ≤ 6.3</td> <td>6000</td> <td>7000</td> <td>6000</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8X11.5</td> <td>8000</td> <td>9000</td> <td>8000</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10X12.5</td> <td>9000</td> <td>9000</td> <td>9000</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8X16, 8X20</td> <td>9000</td> <td>10000</td> <td>9000</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10X16, 10X20, 10X25 φD ≥ 12.5</td> <td colspan="3"></td> <td>10000</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Capacitance Change	Within ±25% of the initial value. (6.3Vdc, 10Vdc: ±30%)	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.	Life Time (hrs)			Case Size	6.3Vdc	10~50Vdc	63~100Vdc	φD ≤ 6.3	6000	7000	6000						8X11.5	8000	9000	8000						10X12.5	9000	9000	9000						8X16, 8X20	9000	10000	9000						10X16, 10X20, 10X25 φD ≥ 12.5				10000				
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Low Temperature Stability Impedance Ratio (MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage (Vdc)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td></td> </tr> </tbody> </table>	Rated Voltage (Vdc)	6.3	10	16	25	35	50	63	80	100	(20°C, 120Hz)	Z(-25°C)/Z(20°C)	2	2	2	2	2	2	2	2	2		Z(-40°C)/Z(20°C)	3	3	3	3	3	3	3	3	3																										
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### ◆ MULTIPLIER FOR RIPPLE CURRENT

Frequency (Hz)		120	1k	10k	100k ≤
Coefficient	8.2~39 μ F	0.42	0.70	0.90	1.00
	47~270 μ F	0.50	0.73	0.92	1.00
	330~680 μ F	0.55	0.77	0.94	1.00
	820~1800 μ F	0.60	0.80	0.96	1.00
	2200~8200 μ F	0.70	0.85	0.98	1.00

### ◆ 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 ≤ 16: α = 1.5			L ≥ 20: α = 2.0			

### ◆ PART NUMBER

□□□	ZLJ	□□□□□	M	□□□	□□□	D X L
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Lead Forming	Case Size

\*Specifications subject to change without notice.



## ◆STANDARD SIZE

Rated Voltage (Vdc)	Capacitance (μF)	Size φDXL(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)		
				20°C, 100kHz	-10°C, 100kHz	
63	270	10X20	1570	0.056	0.23	
	270	12.5X16	1570	0.072	0.27	
	330	10X20	2000	0.042	0.13	
	330	10X25	1990	0.046	0.19	
	330	12.5X16	1900	0.045	0.14	
	390	10X25	2400	0.035	0.11	
	390	12.5X20	1990	0.041	0.13	
	470	12.5X20	2400	0.033	0.099	
	470	12.5X25	2460	0.031	0.093	
	560	12.5X30	2760	0.028	0.084	
	560	16X20	2380	0.032	0.096	
	680	12.5X25	2800	0.025	0.075	
	680	12.5X35	3040	0.024	0.072	
	820	12.5X30	3200	0.022	0.066	
	820	16X20	2900	0.025	0.075	
	820	16X25	2890	0.025	0.075	
	1000	12.5X35	3500	0.018	0.054	
	1000	16X25	3200	0.02	0.06	
	1200	12.5X40	3800	0.021	0.063	
	1200	18X20	3000	0.032	0.096	
	1500	16X31.5	3500	0.02	0.06	
	1500	18X25	3200	0.024	0.072	
1800	16X35.5	3800	0.017	0.051		
1800	18X31.5	3700	0.02	0.06		
2200	16X40	4100	0.015	0.045		
2200	18X35.5	3900	0.017	0.051		
2700	18X40	4300	0.015	0.045		
80	●12	5X11	235	0.72	3.2 NEW	
	12	5X11	220	1.2	5.4	
	●27	6.3X11	390	0.34	1.5 NEW	
	27	6.3X11	370	0.46	2.1	
	●47	8X11.5	650	0.2	0.9 NEW	
	47	8X11.5	620	0.29	1.3	
	56	8X16	780	0.2	0.9	
	68	10X12.5	780	0.17	0.66	
	82	8X16	820	0.14	0.63 NEW	
	82	8X20	1040	0.16	0.66	
	100	10X12.5	860	0.14	0.56 NEW	
	100	10X16	1040	0.11	0.47	
	120	8X20	1090	0.12	0.54 NEW	
	150	10X16	1150	0.09	0.36 NEW	
	150	10X20	1430	0.084	0.34	
	150	12.5X16	1430	0.11	0.34	
	180	10X25	1620	0.069	0.28	
	220	10X20	1570	0.068	0.28 NEW	
	220	12.5X16	1430	0.09	0.27 NEW	
	220	12.5X20	1750	0.062	0.18	
	270	10X25	1780	0.055	0.22 NEW	
	270	12.5X25	2210	0.047	0.14	
	330	12.5X20	1800	0.048	0.15 NEW	
	330	12.5X30	2400	0.042	0.13	
	330	16X20	1950	0.048	0.15	
	390	12.5X25	2210	0.038	0.12 NEW	
	390	12.5X35	2600	0.036	0.11	
	470	12.5X30	2520	0.033	0.11 NEW	
	470	12.5X40	2860	0.032	0.095	
	470	16X20	2150	0.036	0.12 NEW	
	470	16X25	2430	0.038	0.12	
	470	18X20	2270	0.045	0.14	
	560	12.5X35	2860	0.026	0.078 NEW	
	560	16X31.5	2640	0.032	0.095	
	680	12.5X40	3150	0.026	0.078 NEW	
	680	16X25	2620	0.028	0.084 NEW	
	680	18X20	2280	0.032	0.096 NEW	
	680	16X35.5	2860	0.026	0.078	
	680	18X20	2280	0.032	0.096 NEW	
	680	16X35.5	2860	0.029	0.086	
	680	18X25	2500	0.036	0.11	
	100	820	16X31.5	2900	0.022	0.066 NEW
		820	16X40	3510	0.027	0.081
		820	18X31.5	2860	0.03	0.09
		1000	16X35.5	3150	0.02	0.06 NEW
		1000	18X25	2750	0.027	0.081 NEW
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1500		18X35.5	3710	0.018	0.054 NEW	
1800		18X40	4060	0.017	0.051 NEW	
●8.2		5X11	235	0.72	3.2 NEW	
8.2		5X11	220	1.2	5.4	
●18		6.3X11	390	0.34	1.5 NEW	
18		6.3X11	370	0.46	2.1	
●33		8X11.5	650	0.2	0.9 NEW	
33		8X11.5	620	0.29	1.3	
●47		8X16	820	0.14	0.63 NEW	
47		8X16	780	0.2	0.9	
●56		10X12.5	860	0.14	0.56 NEW	
56		10X12.5	780	0.17	0.66	
●68		8X20	1090	0.12	0.54 NEW	
68		8X20	1040	0.16	0.66	
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● : OPTION has EFU.

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