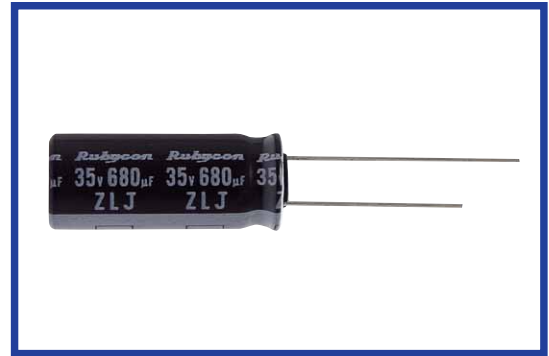


**ZLJ SERIES**
**105°C Miniaturized, Long Life, Low impedance, High ripple.**
**◆FEATURES**

- Load Life : 105°C 6000~10000 hours.
- RoHS compliance.


**◆SPECIFICATIONS**

Items	Characteristics																																										
Category Temperature Range	-40~+105°C																																										
Rated Voltage Range	6.3~100V.DC																																										
Capacitance Tolerance	±20% (20°C, 120Hz)																																										
Leakage Current(MAX)	I=0.01CV or 3µA whichever is greater. (After 2 minutes) $I=(\mu A)$ Leakage Current $C=(\mu F)$ Rated Capacitance $V=(V)$ Rated Voltage																																										
(tanδ) Dissipation Factor(MAX)	<table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</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> </table> <p>When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p>	Rated Voltage	6.3	10	16	25	35	50	63	80	100	(20°C, 120Hz)	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08																					
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tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08																																		
Endurance	<p>After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.(6.3V,10V:±30%)</td> <td>Case Size</td> <td colspan="3">(hrs) Life Time</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> <td>φD≤6.3</td> <td>6.3V.DC</td> <td>10~50V.DC</td> <td>63~100V.DC</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> <td>8×11.5</td> <td>6000</td> <td>7000</td> <td>6000</td> </tr> <tr> <td></td> <td></td> <td>10×12.5</td> <td>8000</td> <td>9000</td> <td>8000</td> </tr> <tr> <td></td> <td></td> <td>8×16,8×20</td> <td>9000</td> <td>9000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>10×16,10×20,10×25</td> <td>9000</td> <td>10000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>φD≥12.5</td> <td colspan="3">10000</td> </tr> </table>	Capacitance Change	Within ±25% of the initial value.(6.3V,10V:±30%)	Case Size	(hrs) Life Time			Dissipation Factor	Not more than 200% of the specified value.	φD≤6.3	6.3V.DC	10~50V.DC	63~100V.DC	Leakage Current	Not more than the specified value.	8×11.5	6000	7000	6000			10×12.5	8000	9000	8000			8×16,8×20	9000	9000	9000			10×16,10×20,10×25	9000	10000	9000			φD≥12.5	10000		
Capacitance Change	Within ±25% of the initial value.(6.3V,10V:±30%)	Case Size	(hrs) Life Time																																								
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		10×12.5	8000	9000	8000																																						
		8×16,8×20	9000	9000	9000																																						
		10×16,10×20,10×25	9000	10000	9000																																						
		φD≥12.5	10000																																								
Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(120Hz)</td> </tr> <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> </table>	Rated Voltage	6.3	10	16	25	35	50	63	80	100	(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										
Rated Voltage	6.3	10	16	25	35	50	63	80	100	(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																																		

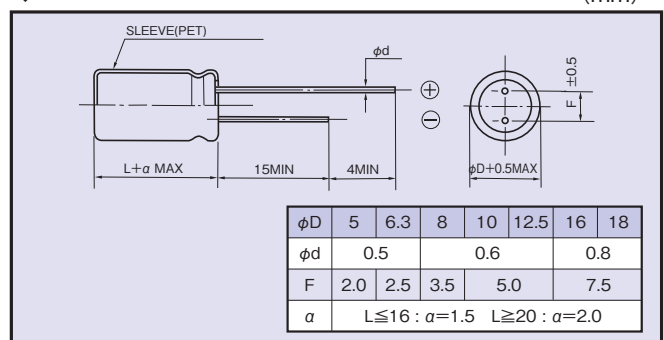
**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency Coefficient

(Hz) Frequency	120	1k	10k	100k≤
8.2~33µF	0.42	0.70	0.90	1.00
47~270µF	0.50	0.73	0.92	1.00
330~680µF	0.55	0.77	0.94	1.00
820~1800µF	0.60	0.80	0.96	1.00
2200~8200µF	0.70	0.85	0.98	1.00

**◆DIMENSIONS**

(mm)


**◆OPTION**

	Code
PET Sleeve	Blank

**◆PART NUMBER**

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

**◆ STANDARD SIZE**

Rated Voltage (V·DC)	Rated capacitance (μF)	Size φD×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	(Ω MAX) Impedance		Rated Voltage (V·DC)	Rated capacitance (μF)	Size φD×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	(Ω MAX) Impedance	
				20°C, 100kHz	-10°C, 100kHz					20°C, 100kHz	-10°C, 100kHz
6.3 (0J)	220	5×11	345	0.40	1.2	25 (1E)	68	5×11	450	0.40	1.2
	470	6.3×11	540	0.17	0.51		150	6.3×11	700	0.17	0.51
	820	8×11.5	945	0.075	0.23		330	8×11.5	1200	0.075	0.23
	1000	8×16	1250	0.059	0.18		390	8×16	1600	0.059	0.18
	1200	10×12.5	1330	0.053	0.16		470	10×12.5	1700	0.053	0.16
	1500	8×20	1500	0.041	0.13		560	8×20	1960	0.041	0.13
	1800	10×16	1760	0.038	0.12		680	10×16	2000	0.038	0.12
	2700	10×20	1960	0.028	0.084		1000	10×20	2500	0.028	0.084
	3300	10×25	2250	0.024	0.072		1200	10×25	2900	0.024	0.072
	3900	12.5×20	2480	0.025	0.075		1500	12.5×20	2600	0.025	0.075
	4700	12.5×25	2900	0.019	0.057		1800	12.5×25	3200	0.019	0.057
	5600	12.5×30	3450	0.018	0.054		2200	12.5×30	3660	0.018	0.054
	6800	16×20	3250	0.021	0.063		2200	16×20	3330	0.021	0.063
	6800	12.5×35	3570	0.016	0.048		2700	12.5×35	4120	0.016	0.048
8200	16×25	3630	0.017	0.051	3300	16×25	3810	0.017	0.051		
10 (1A)	150	5×11	450	0.40	1.2	35 (1V)	47	5×11	450	0.40	1.2
	330	6.3×11	700	0.17	0.51		100	6.3×11	700	0.17	0.51
	560	8×11.5	1200	0.075	0.23		180	8×11.5	1200	0.075	0.23
	680	8×16	1600	0.059	0.18		220	8×16	1600	0.059	0.18
	820	10×12.5	1700	0.053	0.16		270	10×12.5	1700	0.053	0.16
	1000	8×20	1960	0.041	0.13		330	8×20	1960	0.041	0.13
	1200	10×16	2000	0.038	0.12		390	10×16	2000	0.038	0.12
	1800	10×20	2500	0.028	0.084		560	10×20	2500	0.028	0.084
	2200	10×25	2900	0.024	0.072		680	10×25	2900	0.024	0.072
	2700	12.5×20	2600	0.025	0.075		820	12.5×20	2600	0.025	0.075
	3300	12.5×25	3200	0.019	0.057		1200	12.5×25	3200	0.019	0.057
	4700	12.5×30	3660	0.018	0.054		1500	12.5×30	3660	0.018	0.054
	4700	16×20	3330	0.021	0.063		1500	16×20	3330	0.021	0.063
	5600	12.5×35	4120	0.016	0.048		1800	12.5×35	4120	0.016	0.048
5600	16×25	3810	0.017	0.051	1800	16×25	3810	0.017	0.051		
16 (1C)	120	5×11	450	0.40	1.2	50 (1H)	27	5×11	310	0.48	1.5
	270	6.3×11	700	0.17	0.51		56	6.3×11	500	0.22	0.66
	470	8×11.5	1200	0.075	0.23		100	8×11.5	950	0.12	0.36
	560	8×16	1600	0.059	0.18		120	8×16	1230	0.082	0.25
	680	10×12.5	1700	0.053	0.16		150	10×12.5	1280	0.073	0.22
	820	8×20	1960	0.041	0.13		180	8×20	1580	0.058	0.18
	1000	10×16	2000	0.038	0.12		220	10×16	1650	0.053	0.16
	1500	10×20	2500	0.028	0.084		330	10×20	2060	0.038	0.12
	1800	10×25	2900	0.024	0.072		390	10×25	2420	0.032	0.10
	2200	12.5×20	2600	0.025	0.075		470	12.5×20	2300	0.032	0.10
	2700	12.5×25	3200	0.019	0.057		680	12.5×25	2800	0.025	0.080
	3300	12.5×30	3660	0.018	0.054		820	12.5×30	3370	0.023	0.074
	3300	16×20	3330	0.021	0.063		820	16×20	3070	0.026	0.084
	3900	12.5×35	4120	0.016	0.048		1000	12.5×35	3810	0.021	0.067
4700	16×25	3810	0.017	0.051	1000	16×25	3510	0.022	0.070		

**◆ STANDARD SIZE**

Rated Voltage (V·DC)	Rated capacitance (μF)	Size φD×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	(Ω MAX) Impedance		Rated Voltage (V·DC)	Rated capacitance (μF)	Size φD×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	(Ω MAX) Impedance	
				20°C, 100kHz	-10°C, 100kHz					20°C, 100kHz	-10°C, 100kHz
63 (1J)	18	5×11	240	0.71	3.2	100 (2A)	8.2	5×11	220	1.2	5.4
	47	6.3×11	420	0.28	1.3		18	6.3×11	370	0.46	2.1
	82	8×11.5	720	0.18	0.79		33	8×11.5	620	0.29	1.3
	100	8×16	990	0.13	0.58		47	8×16	780	0.20	0.90
	120	10×12.5	990	0.11	0.44		56	10×12.5	780	0.17	0.66
	150	8×20	1200	0.096	0.43		68	8×20	1040	0.16	0.66
	180	10×16	1200	0.076	0.31		82	10×16	1040	0.11	0.47
	270	10×20	1570	0.056	0.23		100	10×20	1430	0.084	0.34
	270	12.5×16	1570	0.072	0.27		100	12.5×16	1430	0.11	0.34
	330	10×25	1990	0.046	0.19		120	10×25	1620	0.069	0.28
	390	12.5×20	1990	0.041	0.13		150	12.5×20	1750	0.062	0.18
	470	12.5×25	2460	0.031	0.093		220	12.5×25	2210	0.047	0.14
	560	12.5×30	2760	0.028	0.084		270	12.5×30	2400	0.042	0.13
	560	16×20	2380	0.032	0.096		270	16×20	1950	0.048	0.15
	680	12.5×35	3040	0.024	0.072		330	12.5×35	2600	0.036	0.11
820	16×25	2890	0.025	0.075	390	12.5×40	2860	0.032	0.095		
80 (1K)	12	5×11	220	1.2	5.4	390	16×25	2430	0.038	0.12	
	27	6.3×11	370	0.46	2.1	390	18×20	2270	0.045	0.14	
	47	8×11.5	620	0.29	1.3	470	16×31.5	2640	0.032	0.095	
	56	8×16	780	0.20	0.90	470	18×25	2500	0.036	0.11	
	68	10×12.5	780	0.17	0.66	560	16×35.5	2860	0.029	0.086	
	82	8×20	1040	0.16	0.66	560	18×31.5	2860	0.030	0.090	
	100	10×16	1040	0.11	0.47	680	16×40	3510	0.027	0.081	
	150	10×20	1430	0.084	0.34	680	18×35.5	3510	0.027	0.081	
	150	12.5×16	1430	0.11	0.34	820	18×40	3860	0.026	0.076	
	180	10×25	1620	0.069	0.28						
	220	12.5×20	1750	0.062	0.18						
	270	12.5×25	2210	0.047	0.14						
	330	12.5×30	2400	0.042	0.13						
	330	16×20	1950	0.048	0.15						
	390	12.5×35	2600	0.036	0.11						
	470	12.5×40	2860	0.032	0.095						
	470	16×25	2430	0.038	0.12						
	470	18×20	2270	0.045	0.14						
	560	16×31.5	2640	0.032	0.095						
	680	16×35.5	2860	0.029	0.086						
	680	18×25	2500	0.036	0.11						
820	16×40	3510	0.027	0.081							
820	18×31.5	2860	0.030	0.090							
1000	18×35.5	3510	0.027	0.081							
1200	18×40	3860	0.026	0.076							