

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℃																																																																			
Rated Voltage Range	6.3~100V.DC																																																																			
Capacitance Tolerance	±20% (20℃,120Hz)																																																																			
Leakage Current(MAX)	I=0.01CV or 3μA whichever is greater.(After 2 minutes) I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(V)																																																																			
Dissipation Factor(MAX) (tanδ)	<table><tr><td>Rated Voltage (V)</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></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></tr></table> (20℃,120Hz) When capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.										Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100	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	After life test with rated ripple current at conditions stated in the table below at 105℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td colspan="9">Within ±25% of the initial value.(6.3V,10V:±30%)</td></tr><tr><td>Dissipation Factor</td><td colspan="9">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="9">Not more than the specified value.</td></tr></table> <table><tr><td rowspan="2">Case Size</td><td colspan="3">Life Time(hrs)</td></tr><tr><td>6.3V.DC</td><td>10~50V.DC</td><td>63~100V.DC</td></tr><tr><td>φD≤6.3</td><td>6000</td><td>7000</td><td>6000</td></tr><tr><td>8×11.5</td><td>8000</td><td>9000</td><td>8000</td></tr><tr><td>10×12.5</td><td>9000</td><td>9000</td><td>9000</td></tr><tr><td>8×16.8×20</td><td>9000</td><td>10000</td><td>9000</td></tr><tr><td>10×16,10×20,10×25</td><td colspan="3" rowspan="2">10000</td></tr><tr><td>φD≥12.5</td></tr></table>										Capacitance Change	Within ±25% of the initial value.(6.3V,10V:±30%)									Dissipation Factor	Not more than 200% of the specified value.									Leakage Current	Not more than the specified value.									Case Size	Life Time(hrs)			6.3V.DC	10~50V.DC	63~100V.DC	φD≤6.3	6000	7000	6000	8×11.5	8000	9000	8000	10×12.5	9000	9000	9000	8×16.8×20	9000	10000	9000	10×16,10×20,10×25	10000			φD≥12.5
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Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage (V)</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></tr><tr><td>Z(-25℃)/Z(20℃)</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></tr><tr><td>Z(-40℃)/Z(20℃)</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></tr></table> (120Hz)										Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100	Z(-25℃)/Z(20℃)	2	2	2	2	2	2	2	2	2	Z(-40℃)/Z(20℃)	3	3	3	3	3	3	3	3	3																												
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Z(-25℃)/Z(20℃)	2	2	2	2	2	2	2	2	2																																																											
Z(-40℃)/Z(20℃)	3	3	3	3	3	3	3	3	3																																																											

◆MULTIPLIER FOR RIPPLE CURRENT

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

◆OPTION

PET Sleeve	Code
	Blank

◆DIMENSIONS

(mm)

Technical drawing of a ZLJ capacitor showing side and end views.

Side View Dimensions:

- SLEEVE(PET)**: Label for the sleeve.
- ϕd** : Diameter of the central pin.
- $L+a \text{ MAX}$** : Total length of the capacitor body.
- 15MIN**: Minimum length of the sleeve.
- 4MIN**: Minimum length of the pin.

End View Dimensions:

- $\phi D+0.5 \text{ MAX}$** : Maximum outer diameter of the capacitor body.
- $L+0.5$** : Dimension from the center of the pin to the end of the body.

Surface Markings:

- (1)**: Marking on the side of the capacitor body.
- (+)**: Marking on the end of the capacitor body.

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
a	$L \leq 16 : a = 1.5$			$L \geq 20 : a = 2.0$			

◆PART NUMBER

Rated Voltage	ZLJ	Series	Capacitance	M	Capacitance Tolerance	Option	Lead Forming	D×L	Case Size
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◆STANDARD SIZE

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

◆STANDARD SIZE

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