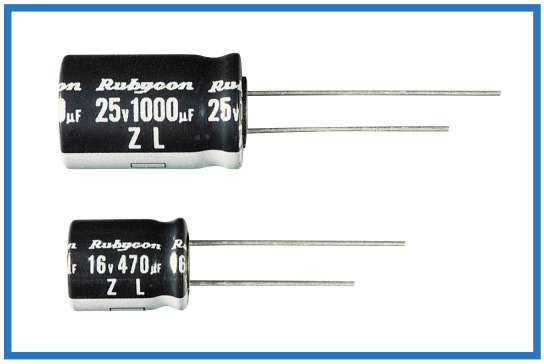
ZL SERIES NEW

105˚C High ripple current, Low impedance.



♦FEATURES

- Enabled high ripple current by a reduction of impedance at high frequency range.
- Load Life : 105˚C 2000~5000hours.

♦SPECIFICATIONS

Items	Characteristics
Operating 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=Leakage Current(μA) C=Nominal Capacitance(μF) V=Rated Voltage(V)
Dissipation Factor(MAX)	(20˚C, 120Hz) When nominal capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.
Load Life	After life test with max. ripple current at conditions stated in the table below, the capacitors shall meet the following requirements.
Low Temperature Stability Impedance Ratio(MAX)	(120Hz)
Reference Standard	JIS C 5141, EIAJ RC-2372

Dissipation Factor(MAX):

Rated Voltage (V)	6.3	10	16	25	35	50	63	100
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08

Load Life:

Capacitance Change	Within ±25% of the initial value.
Dissipation Factor	Not more than 200% of the specified value.
Leakage Current	Not more than the specified value.

Case Dia	Life Time(hrs)
φD≦6.3	2000
φD=8	3000
φD=10	4000
φD≧12.5	5000

Low Temperature Stability Impedance Ratio(MAX):

Rated Voltage(V)	6.3	10	16	25	35	50	63	100
Z(-25˚C)/Z(20˚C)	2	2	2	2	2	2	2	2
Z(-40˚C)/Z(20˚C)	3	3	3	3	3	3	3	3

♦MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

- 6.3~50WV

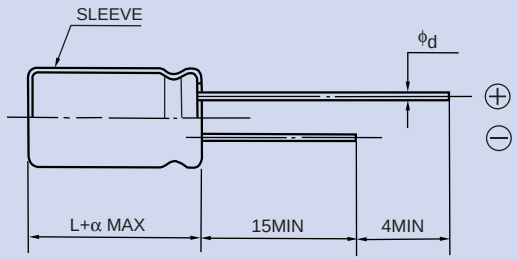
Cap(μF) \ Freq(Hz)	60(50)	120	1k	10	100k ≦
22~33	0.45	0.55	0.75	0.90	1.00
47~330	0.60	0.70	0.85	0.95	1.00
470~1000	0.65	0.75	0.90	0.98	1.00
1200~6800	0.75	0.80	0.95	1.00	1.00

- 63~100WV

Cap(μF) \ Freq(Hz)	60(50)	120	1k	10k	100k ≦
6.8~33	0.45	0.55	0.75	0.90	1.00
39~330	0.50	0.60	0.80	0.95	1.00
390~1500	0.55	0.65	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						

♦STANDARD SIZE

Rated voltage 6.3V(0J)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
150	5x11	250	0.30	1.0
330	6.3x11	405	0.13	0.41
560	8x11.5	760	0.072	0.22
820	8x16	995	0.056	0.17
1200	8x20	1250	0.041	0.13
1000	10x12.5	1030	0.053	0.16
1200	10x16	1430	0.038	0.12
1500	10x20	1820	0.023	0.069
2200	10x23	2150	0.022	0.066
3300	12.5x20	2360	0.021	0.053
3900	12.5x25	2770	0.018	0.045
4700	12.5x30	3290	0.016	0.041
5600	12.5x35	3400	0.015	0.039
5600	16x20	3140	0.018	0.045
6800	16x25	3460	0.016	0.043

Rated voltage 10V(1A)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
100	5x11	250	0.30	1.0
220	6.3x11	405	0.13	0.41
470	8x11.5	760	0.072	0.22
680	8x16	995	0.056	0.17
1000	8x20	1250	0.041	0.13
680	10x12.5	1030	0.053	0.16
1000	10x16	1430	0.038	0.12
1200	10x20	1820	0.023	0.069
1500	10x23	2150	0.022	0.066
2200	12.5x20	2360	0.021	0.053
3300	12.5x25	2770	0.018	0.045
3900	12.5x30	3290	0.016	0.041
4700	12.5x35	3400	0.015	0.039
3900	16x20	3140	0.018	0.045
5600	16x25	3460	0.016	0.043

Rated voltage 16V(1C)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
56	5x11	250	0.30	1.0
120	6.3x11	405	0.13	0.41
330	8x11.5	760	0.072	0.22
470	8x16	995	0.056	0.17
680	8x20	1250	0.041	0.13
470	10x12.5	1030	0.053	0.16
680	10x16	1430	0.038	0.12
1000	10x20	1820	0.023	0.069
1200	10x23	2150	0.022	0.066
1500	12.5x20	2360	0.021	0.053
2200	12.5x25	2770	0.018	0.045
2700	12.5x30	3290	0.016	0.041
3300	12.5x35	3400	0.015	0.039
2700	16x20	3140	0.018	0.045
3900	16x25	3460	0.016	0.043

Rated voltage 25V(1E)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
47	5x11	250	0.30	1.0
100	6.3x11	405	0.13	0.41
220	8x11.5	760	0.072	0.22
330	8x16	995	0.056	0.17
470	8x20	1250	0.041	0.13
330	10x12.5	1030	0.053	0.16
470	10x16	1430	0.038	0.12
680	10x20	1820	0.023	0.069
820	10x23	2150	0.022	0.066
1000	12.5x20	2360	0.021	0.053
1500	12.5x25	2770	0.018	0.045
1800	12.5x30	3290	0.016	0.041
2200	12.5x35	3400	0.015	0.039
1800	16x20	3140	0.018	0.045
2700	16x25	3460	0.016	0.043

Rated voltage 35V(1V)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
33	5x11	250	0.30	1.0
56	6.3x11	405	0.13	0.41
150	8x11.5	760	0.072	0.22
220	8x16	995	0.056	0.17
270	8x20	1250	0.041	0.13
220	10x12.5	1030	0.053	0.16
330	10x16	1430	0.038	0.12
470	10x20	1820	0.023	0.069
560	10x23	2150	0.022	0.066
680	12.5x20	2360	0.021	0.053
1000	12.5x25	2770	0.018	0.045
1200	12.5x30	3290	0.016	0.041
1500	12.5x35	3400	0.015	0.039
1200	16x20	3140	0.018	0.045
1800	16x25	3460	0.016	0.043

Rated voltage 50V(1H)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
22	5x11	238	0.34	1.18
56	6.3x11	385	0.14	0.50
100	8x11.5	724	0.074	0.22
120	8x16	950	0.061	0.18
180	8x20	1190	0.046	0.14
150	10x12.5	979	0.061	0.18
220	10x16	1370	0.042	0.12
270	10x20	1580	0.030	0.090
330	10x23	1870	0.028	0.085
470	12.5x20	2050	0.027	0.068
560	12.5x25	2410	0.023	0.059
680	12.5x30	2860	0.021	0.052
820	12.5x35	2960	0.019	0.051
820	16x20	2730	0.023	0.059
1000	16x25	3010	0.021	0.056

Rated voltage 63V(1J)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
15	5x11	165	0.88	3.5
33	6.3x11	265	0.35	1.4
56	8x11.5	500	0.22	0.88
82	8x16	665	0.16	0.64
120	8x20	820	0.12	0.48
82	10x12.5	685	0.15	0.60
120	10x16	945	0.11	0.44
180	10x20	1100	0.080	0.32
220	10x23	1300	0.073	0.29
180	12.5x16	1135	0.082	0.27
270	12.5x20	1495	0.060	0.20
330	12.5x25	1850	0.043	0.14
470	12.5x30	2250	0.039	0.13
560	12.5x35	2450	0.033	0.11
680	12.5x40	2780	0.029	0.096
470	16x20	1990	0.045	0.14
560	16x25	2550	0.032	0.096
820	16x31.5	2810	0.026	0.078
1000	16x35.5	2835	0.021	0.063
1200	16x40	3340	0.019	0.057
680	18x20	2450	0.038	0.10
820	18x25	2780	0.031	0.084
1000	18x31.5	3270	0.025	0.068
1200	18x35.5	3310	0.020	0.054
1500	18x40	3420	0.018	0.049

Rated voltage 100V(2A)				
Nominal capacitance (μF)	Size φDxL(mm)	Maximum permissible ripple current (mA r.m.s./105˚C, 100kHz)	Impedance(ΩMAX)	
			20˚C, 100kHz	-10˚C, 100kHz
6.8	5x11	125	1.40	5.6
15	6.3x11	205	0.57	2.3
27	8x11.5	355	0.36	1.4
39	8x16	450	0.25	1.0
56	8x20	565	0.19	0.76
47	10x12.5	450	0.24	0.96
68	10x16	580	0.18	0.72
82	10x20	750	0.13	0.52
100	10x23	880	0.12	0.48
82	12.5x16	735	0.13	0.43
120	12.5x20	1045	0.094	0.31
180	12.5x25	1195	0.071	0.23
220	12.5x30	1410	0.063	0.21
270	12.5x35	1560	0.052	0.17
330	12.5x40	1700	0.046	0.15
220	16x20	1295	0.071	0.21
270	16x25	1600	0.053	0.16
390	16x31.5	1750	0.041	0.12
470	16x35.5	1890	0.033	0.10
560	16x40	2080	0.030	0.090
270	18x20	1470	0.069	0.19
390	18x25	1620	0.049	0.13
470	18x31.5	1775	0.039	0.11
560	18x35.5	2060	0.031	0.084
680	18x40	2570	0.028	0.076