

VPL

- ◆ 105°C 5000 Hours
- ◆ Long Life SMD Type
- ◆ High Stability, Low ESR, High Frequency
- ◆ RoHS Compliant (2011/65/EU) , AEC-Q200

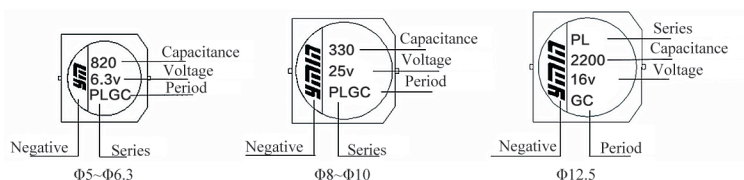
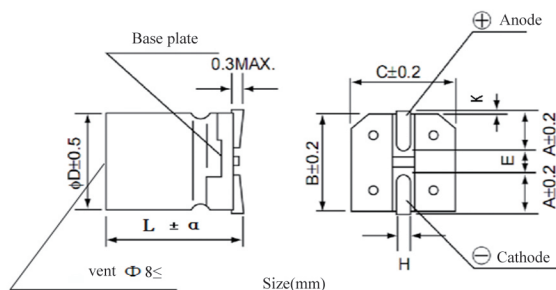


■ Specification

Items	Characteristics								
Operation Temperature Range	-55°C~+105°C								
Rated Voltage	6.3~100V								
Capacitance Range	2.2~10000μF 120Hz/20°C								
Capacitance Tolerance	±20%(120Hz/20°C)								
Dissipation Factor	Less than standard data 120Hz/20°C								
Leakage Current	Less than standard data charging 2mins with rated voltage, 20°C								
ESR	Less than standard data 100KHz/20°C								
Endurance	After load rated voltage for 2000hours at 105°C, the following specification shall be satisfied after placing capacitor for 16 hours at 20°C <table> <tr> <td>Capacitance change</td><td>Within±20% of the initial value</td></tr> <tr> <td>ESR</td><td>Not more than 150% of the specified value</td></tr> <tr> <td>Dissipation Factor</td><td>Not more than 150% of the specified value</td></tr> <tr> <td>Leakage current</td><td>Not more than the specified value</td></tr> </table>	Capacitance change	Within±20% of the initial value	ESR	Not more than 150% of the specified value	Dissipation Factor	Not more than 150% of the specified value	Leakage current	Not more than the specified value
Capacitance change	Within±20% of the initial value								
ESR	Not more than 150% of the specified value								
Dissipation Factor	Not more than 150% of the specified value								
Leakage current	Not more than the specified value								
Humidity	Store the capacitor at 60°C under the condition of 90%~95%R.H with no load for 1000hrs, the following specifications shall be satisfied after placing capacitor for 16 hours at 20°C. <table> <tr> <td>Capacitance change</td><td>Within±20% of the initial value</td></tr> <tr> <td>ESR</td><td>Not more than 150% of the specified value</td></tr> <tr> <td>Dissipation Factor</td><td>Not more than 150% of the specified value</td></tr> <tr> <td>Leakage current</td><td>Not more than the specified value</td></tr> </table>	Capacitance change	Within±20% of the initial value	ESR	Not more than 150% of the specified value	Dissipation Factor	Not more than 150% of the specified value	Leakage current	Not more than the specified value
Capacitance change	Within±20% of the initial value								
ESR	Not more than 150% of the specified value								
Dissipation Factor	Not more than 150% of the specified value								
Leakage current	Not more than the specified value								

If you have question for leakage current, please apply rated voltage on capacitors at 105°C for 2hours, then test the leakage current again at 20°C.

■ Standard Size



ΦD	B	C	A	H	E	K	α
5	5.3	5.3	2.1	0.65±0.10	1.3	0.5MAX	±0.5
6.3	6.6	6.6	2.6	0.90±0.20	1.8	0.5MAX	
8	8.3	8.3	3.4	0.90±0.20	3.1	0.5MAX	
10	10.3	10.3	3.5	0.90±0.20	4.6	0.7±0.20	
12.5	13.5	13.5	4.7	0.90±0.30	4.4	0.7±0.30	

■ Rated Ripple Current Frequency Correction Factor

Frequency(Hz)	120Hz	1KHz	10KHz	100KHz	300KHz
Correction factor	0.10	0.45	0.50	1.00	1.00

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■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
6.3(7.2)	100	5×5.8	280	0.08	20	2400
6.3(7.2)	100	6.3×4.5	280	0.08	20	2500
6.3(7.2)	150	5×5.8	280	0.08	20	2400
6.3(7.2)	150	6.3×4.5	280	0.08	20	2500
6.3(7.2)	180	5×5.8	280	0.08	18	2600
6.3(7.2)	180	6.3×4.5	280	0.08	20	2500
6.3(7.2)	220	5×5.8	280	0.08	18	2600
6.3(7.2)	220	6.3×4.5	280	0.08	20	2500
6.3(7.2)	270	5×7.7	340	0.08	12	3400
6.3(7.2)	270	6.3×5.8	340	0.08	18	2800
6.3(7.2)	330	5×7.7	416	0.08	12	3400
6.3(7.2)	330	6.3×5.8	416	0.08	18	2800
6.3(7.2)	390	5×8.5	491	0.08	12	3400
6.3(7.2)	390	6.3×5.8	491	0.08	8	4800
6.3(7.2)	470	5×8.5	592	0.08	12	3650
6.3(7.2)	470	6.3×7.7	592	0.08	8	4800
6.3(7.2)	470	8×6.5	592	0.08	18	3000
6.3(7.2)	560	6.3×8.5	706	0.08	12	3800
6.3(7.2)	560	6.3×7.7	706	0.08	8	4800
6.3(7.2)	560	8×6.5	706	0.08	16	3450
6.3(7.2)	680	6.3×8.5	857	0.08	8	5000
6.3(7.2)	680	8×7.7	857	0.08	12	4200
6.3(7.2)	820	6.3×9.5	1033	0.08	8	4900
6.3(7.2)	820	6.3×9.5	1033	0.08	8	5250
6.3(7.2)	820	6.3×7.7	1033	0.08	8	4900
6.3(7.2)	820	8×7.7	1033	0.08	12	4200
6.3(7.2)	1000	6.3×11	1260	0.08	8	5500
6.3(7.2)	1000	8×9	1260	0.08	8	5600
6.3(7.2)	1000	10×8.5	1260	0.08	12	4500
6.3(7.2)	1200	6.3×12	1512	0.08	8	5700
6.3(7.2)	1200	8×10	1512	0.08	8	5800
6.3(7.2)	1200	10×9.5	1512	0.08	8	5800
6.3(7.2)	1500	8×12.5	1890	0.09	8	6150
6.3(7.2)	1500	10×10.5	1890	0.09	8	6050
6.3(7.2)	2000	8×15	2520	0.10	7	7250
6.3(7.2)	2000	10×10.5	2520	0.10	8	6300
6.3(7.2)	2200	8×15	2772	0.10	7	7500
6.3(7.2)	2200	10×10.5	2772	0.10	8	6300
6.3(7.2)	2700	10×13.5	3402	0.11	8	6500
6.3(7.2)	3300	10×13.5	4158	0.13	8	6640
6.3(7.2)	3900	10×15.5	4914	0.14	7	7600
6.3(7.2)	4700	10×17	5922	0.15	7	8100
6.3(7.2)	4700	12.5×13.5	5922	0.15	8	7600

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■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
6.3(7.2)	5600	10×19.5	7056	0.17	7	8500
6.3(7.2)	5600	12.5×15	7056	0.17	8	7900
6.3(7.2)	6800	10×22	7500	0.20	7	9100
6.3(7.2)	6800	12.5×17	7500	0.20	7	8950
6.3(7.2)	8200	12.5×18.5	7500	0.22	7	9450
6.3(7.2)	10000	12.5×21	7500	0.26	7	9850
7.5(8.6)	270	5×7.7	405	0.08	12	3400
7.5(8.6)	270	6.3×5.8	405	0.08	18	2800
7.5(8.6)	330	5×9.5	495	0.08	12	3800
7.5(8.6)	330	6.3×5.8	495	0.08	12	3700
7.5(8.6)	390	5×9.5	585	0.08	10	4350
7.5(8.6)	390	6.3×7.7	585	0.08	12	3900
7.5(8.6)	390	8×6.5	585	0.08	18	3250
7.5(8.6)	470	5×9.5	705	0.08	12	3850
7.5(8.6)	470	6.3×8.5	705	0.08	12	4100
7.5(8.6)	470	8×6.5	705	0.08	18	3000
7.5(8.6)	560	6.3×9.5	840	0.08	9	5000
7.5(8.6)	560	8×6.5	840	0.08	18	3250
7.5(8.6)	680	6.3×11	1020	0.08	8	5500
7.5(8.6)	680	8×7.7	1020	0.08	12	4200
7.5(8.6)	820	6.3×12	1230	0.08	8	5700
7.5(8.6)	820	8×9	1230	0.08	8	5600
7.5(8.6)	1000	6.3×12	1500	0.08	8	5900
7.5(8.6)	1000	8×10	1500	0.08	8	5800
10(11.5)	47	5×5.8	280	0.08	30	1900
10(11.5)	47	6.3×4.5	280	0.08	30	2100
10(11.5)	68	5×5.8	280	0.08	30	1900
10(11.5)	68	6.3×4.5	280	0.08	30	2100
10(11.5)	82	5×5.8	280	0.08	30	1900
10(11.5)	82	6.3×4.5	280	0.08	30	2100
10(11.5)	100	5×5.8	280	0.08	30	1900
10(11.5)	100	6.3×4.5	280	0.08	30	2100
10(11.5)	150	5×7.7	300	0.08	15	3050
10(11.5)	150	6.3×5.8	300	0.08	30	2200
10(11.5)	180	5×7.7	360	0.08	15	3050
10(11.5)	180	6.3×5.8	360	0.08	30	2200
10(11.5)	220	5×7.7	440	0.08	15	3050
10(11.5)	220	6.3×5.8	440	0.08	30	2200
10(11.5)	270	5×9.5	540	0.08	12	3950
10(11.5)	270	6.3×5.8	540	0.08	16	3200
10(11.5)	330	6.3×7.7	660	0.08	16	3200
10(11.5)	390	6.3×7.7	780	0.08	12	3900
10(11.5)	390	8×6.5	780	0.08	30	2550

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Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
10(11.5)	470	6.3×8.5	940	0.08	12	4300
10(11.5)	470	8×7.7	940	0.08	30	2550
10(11.5)	560	6.3×11	1120	0.08	10	4900
10(11.5)	560	8×7.7	1120	0.08	14	2550
10(11.5)	680	6.3×12	1360	0.08	9	5400
10(11.5)	680	8×9	1360	0.08	10	5100
10(11.5)	820	8×10	1640	0.08	9	5500
10(11.5)	820	10×8.5	1640	0.08	14	2850
10(11.5)	1000	8×12.5	2000	0.08	9	5800
10(11.5)	1000	10×8.5	2000	0.08	9	5500
10(11.5)	1500	8×15	3000	0.09	8	6800
10(11.5)	1500	10×10.5	3000	0.09	9	6300
10(11.5)	2200	10×12.5	4400	0.10	8	7000
10(11.5)	2500	10×13.5	5000	0.11	8	7000
10(11.5)	2700	10×17	5400	0.11	8	7500
10(11.5)	3300	10×19.5	6600	0.13	8	7900
10(11.5)	3300	12.5×15	6600	0.13	9	7500
10(11.5)	3900	10×22	7500	0.14	8	8400
10(11.5)	3900	12.5×17	7500	0.14	8	8400
10(11.5)	4700	12.5×18.5	7500	0.15	8	8400
10(11.5)	5600	12.5×18.5	7500	0.17	8	8800
10(11.5)	6800	12.5×21	7500	0.20	8	9200
12(13.8)	180	5×7.7	432	0.08	15	3050
12(13.8)	180	6.3×5.8	432	0.08	30	2200
12(13.8)	220	5×9.5	528	0.08	15	3400
12(13.8)	220	6.3×5.8	528	0.08	16	3200
12(13.8)	270	5×9.5	648	0.08	12	3950
12(13.8)	270	6.3×7.7	648	0.08	16	3200
12(13.8)	330	5×9.5	792	0.08	12	3950
12(13.8)	330	6.3×7.7	792	0.08	12	3900
12(13.8)	330	8×6.5	792	0.08	30	2550
12(13.8)	390	6.3×9.5	936	0.08	15	3450
12(13.8)	390	6.3×8.5	936	0.08	12	4100
12(13.8)	470	6.3×9.5	1128	0.08	12	4300
12(13.8)	470	8×7.7	1128	0.08	14	2550
12(13.8)	560	6.3×11	1344	0.08	10	4900
12(13.8)	560	8×7.7	1344	0.08	14	2550
12(13.8)	680	6.3×12	1632	0.08	9	5400
12(13.8)	680	8×9	1632	0.08	10	5100
12(13.8)	1000	8×12.5	2400	0.08	10	5200
16(18.4)	22	5×5.8	280	0.08	30	1900
16(18.4)	22	6.3×4.5	280	0.08	30	2100
16(18.4)	33	5×5.8	280	0.08	30	1900

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Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
16(18.4)	33	6.3×4.5	280	0.08	30	2100
16(18.4)	47	5×5.8	280	0.08	30	1900
16(18.4)	47	6.3×4.5	280	0.08	30	2100
16(18.4)	68	5×5.8	280	0.08	30	1900
16(18.4)	68	6.3×4.5	280	0.08	30	2100
16(18.4)	82	5×5.8	280	0.08	30	1900
16(18.4)	82	6.3×4.5	280	0.08	30	2100
16(18.4)	100	5×7.7	320	0.08	30	2000
16(18.4)	100	5×7.7	320	0.08	30	2200
16(18.4)	100	6.3×5.8	320	0.08	30	2100
16(18.4)	150	5×8.5	480	0.08	30	2200
16(18.4)	150	6.3×5.8	480	0.08	30	2200
16(18.4)	220	5×9.5	704	0.08	12	3950
16(18.4)	220	6.3×9.5	704	0.08	12	3950
16(18.4)	220	6.3×7.7	704	0.08	20	2850
16(18.4)	220	6.3×7.7	704	0.08	20	2850
16(18.4)	270	6.3×8.5	864	0.08	15	3500
16(18.4)	270	8×7.7	864	0.08	30	2550
16(18.4)	330	6.3×9.5	1056	0.08	12	4300
16(18.4)	330	8×7.7	1056	0.08	30	2550
16(18.4)	390	6.3×9.5	1248	0.08	12	4300
16(18.4)	470	6.3×12	1504	0.08	10	4900
16(18.4)	470	8×9	1504	0.08	20	3300
16(18.4)	560	8×10	1792	0.08	12	4700
16(18.4)	560	10×8.5	1792	0.08	12	4700
16(18.4)	680	8×12.5	2176	0.08	10	5350
16(18.4)	680	10×8.5	2176	0.08	12	4700
16(18.4)	820	8×13.5	2624	0.08	10	5500
16(18.4)	820	10×9.5	2624	0.08	12	4950
16(18.4)	1000	8×15	3200	0.08	8	6800
16(18.4)	1000	8×16.5	3200	0.08	10	5800
16(18.4)	1000	10×9.5	3200	0.08	12	5200
16(18.4)	1500	10×15.5	4800	0.09	8	8400
16(18.4)	1800	10×17	5760	0.10	8	7000
16(18.4)	2200	10×19.5	7040	0.10	8	7500
16(18.4)	2200	12.5×15	7040	0.10	10	7100
16(18.4)	2700	10×22	7500	0.11	8	8400
16(18.4)	2700	12.5×17	7500	0.11	10	7100
16(18.4)	3300	12.5×18.5	7500	0.13	8	8400
16(18.4)	3900	12.5×21	7500	0.14	8	8800
25(28.8)	10	5×5.8	280	0.08	40	1650
25(28.8)	10	6.3×4.5	280	0.08	40	1800
25(28.8)	15	5×5.8	280	0.08	40	1650

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Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
25(28.8)	15	6.3×4.5	280	0.08	40	1800
25(28.8)	22	5×5.8	280	0.08	40	1650
25(28.8)	22	6.3×4.5	280	0.08	40	1800
25(28.8)	33	5×5.8	280	0.08	40	1650
25(28.8)	33	6.3×4.5	280	0.08	40	1800
25(28.8)	39	5×5.8	280	0.08	40	1650
25(28.8)	39	6.3×4.5	280	0.08	40	1800
25(28.8)	47	5×5.8	280	0.08	30	2050
25(28.8)	47	6.3×4.5	280	0.08	40	1800
25(28.8)	68	5×7.7	340	0.08	30	2200
25(28.8)	68	6.3×5.8	340	0.08	40	1900
25(28.8)	100	5×9.5	500	0.08	30	2400
25(28.8)	100	6.3×5.8	500	0.08	30	2350
25(28.8)	150	6.3×8.5	750	0.08	16	3550
25(28.8)	150	8×6.5	750	0.08	30	2550
25(28.8)	180	6.3×8.5	900	0.08	16	3550
25(28.8)	180	8×7.7	900	0.08	30	2550
25(28.8)	220	6.3×9.5	1100	0.08	20	3500
25(28.8)	220	8×7.7	1100	0.08	30	2700
25(28.8)	220	10×6.7	1100	0.08	30	2700
25(28.8)	330	8×10	1650	0.08	16	4000
25(28.8)	330	10×8.5	1650	0.08	16	4100
25(28.8)	470	8×15	2350	0.08	16	4800
25(28.8)	470	8×12.5	2350	0.08	16	4200
25(28.8)	470	10×9.5	2350	0.08	16	4300
25(28.8)	560	8×15	2800	0.08	16	4800
25(28.8)	560	8×12.5	2800	0.08	16	4400
25(28.8)	560	10×10.5	2800	0.08	16	4500
25(28.8)	680	8×15	3400	0.08	16	4800
25(28.8)	680	10×12.5	3400	0.08	16	4700
25(28.8)	820	8×16.5	4100	0.08	16	5050
25(28.8)	820	10×15.5	4100	0.08	16	4800
25(28.8)	1000	10×17	5000	0.08	16	5300
25(28.8)	1000	12.5×13.5	5000	0.08	16	5300
25(28.8)	1500	10×19.5	7500	0.09	16	5600
25(28.8)	1500	12.5×15	7500	0.09	16	5600
25(28.8)	1800	10×22	7500	0.10	16	6000
25(28.8)	1800	12.5×17	7500	0.10	16	5900
25(28.8)	2200	12.5×18.5	7500	0.10	16	6200
25(28.8)	2700	12.5×21	7500	0.11	16	6500
35(41)	10	5×5.8	300	0.12	60	1350
35(41)	10	6.3×4.5	300	0.12	60	1400
35(41)	15	5×5.8	300	0.12	60	1350

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Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
35(41)	15	6.3×4.5	300	0.12	60	1400
35(41)	22	5×5.8	300	0.12	60	1450
35(41)	22	6.3×4.5	300	0.12	60	1400
35(41)	33	5×5.8	300	0.12	60	1450
35(41)	33	6.3×4.5	300	0.12	60	1400
35(41)	39	5×7.7	300	0.12	50	1700
35(41)	39	6.3×5.8	300	0.12	60	1550
35(41)	47	5×7.7	329	0.12	50	1700
35(41)	47	6.3×5.8	329	0.12	60	1550
35(41)	56	5×7.7	392	0.12	50	1700
35(41)	56	6.3×5.8	392	0.12	60	1650
35(41)	68	5×8.5	476	0.12	50	1800
35(41)	68	6.3×5.8	476	0.12	60	1650
35(41)	68	8×6.5	476	0.12	60	1650
35(41)	82	5×9.5	574	0.12	50	1900
35(41)	82	6.3×7.7	574	0.12	50	1900
35(41)	100	6.3×7.7	700	0.12	50	1900
35(41)	100	8×6.5	700	0.12	60	1800
35(41)	120	6.3×8.5	840	0.12	50	2050
35(41)	120	8×7.7	840	0.12	60	1900
35(41)	150	6.3×9.5	1050	0.12	50	2150
35(41)	150	8×7.7	1050	0.12	60	1900
35(41)	180	6.3×11	1260	0.12	40	2500
35(41)	180	8×7.7	1260	0.12	60	1900
35(41)	220	6.3×12	1540	0.12	40	2600
35(41)	220	8×9	1540	0.12	50	2200
35(41)	220	10×8.5	1540	0.12	60	2050
35(41)	330	8×12.5	2310	0.12	30	3100
35(41)	330	10×8.5	2310	0.12	50	2350
35(41)	390	8×13.5	2730	0.12	30	3200
35(41)	390	10×10.5	2730	0.12	50	2550
35(41)	470	8×15	3290	0.12	20	4250
35(41)	470	10×13.5	3290	0.12	30	3400
35(41)	560	8×16.5	3920	0.12	20	4550
35(41)	560	10×13.5	3920	0.12	30	3450
35(41)	680	10×15.5	4760	0.12	20	4450
35(41)	820	10×17	5000	0.12	20	4700
35(41)	820	12.5×13.5	5000	0.12	30	3900
35(41)	1000	10×19.5	5000	0.08	20	5000
35(41)	1000	12.5×15	5000	0.08	30	4100
35(41)	1200	10×22	5000	0.08	20	5300
35(41)	1200	12.5×17	5000	0.08	20	5300
35(41)	1500	12.5×18.5	5000	0.09	20	5600

VPL

■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
35(41)	1800	12.5×21	5000	0.10	20	5850
50(58)	10	5×5.8	300	0.12	60	1350
50(58)	10	6.3×4.5	300	0.12	60	1400
50(58)	12	5×5.8	300	0.12	60	1350
50(58)	12	6.3×4.5	300	0.12	60	1400
50(58)	15	5×5.8	300	0.12	60	1450
50(58)	15	6.3×4.5	300	0.12	60	1400
50(58)	18	5×7.7	300	0.12	60	1450
50(58)	18	6.3×5.8	300	0.12	60	1400
50(58)	22	5×7.7	300	0.12	60	1450
50(58)	22	6.3×5.8	300	0.12	60	1550
50(58)	33	5×9.5	330	0.12	50	1800
50(58)	33	6.3×7.7	330	0.12	60	1650
50(58)	39	5×9.5	390	0.12	40	2200
50(58)	39	6.3×7.7	390	0.12	60	1650
50(58)	47	6.3×8.5	470	0.12	50	1900
50(58)	47	8×7.7	470	0.12	60	1650
50(58)	56	6.3×9.5	560	0.12	50	1900
50(58)	56	8×7.7	560	0.12	60	1800
50(58)	68	6.3×11	680	0.12	50	2150
50(58)	68	8×7.7	680	0.12	60	1800
50(58)	82	6.3×12	820	0.12	40	2500
50(58)	82	8×9	820	0.12	60	1900
50(58)	100	8×10	1000	0.12	50	2200
50(58)	100	10×8.5	1000	0.12	60	2000
50(58)	120	8×12.5	1200	0.12	50	2300
50(58)	120	10×8.5	1200	0.12	60	2050
50(58)	150	8×13.5	1500	0.12	50	2300
50(58)	150	10×8.5	1500	0.12	50	2350
50(58)	180	8×15	1800	0.12	40	2800
50(58)	180	10×9.5	1800	0.12	50	2450
50(58)	220	8×16.5	2200	0.12	30	3500
50(58)	220	10×13.5	2200	0.12	40	2900
50(58)	270	10×14.5	2700	0.12	40	3000
50(58)	330	10×17	3300	0.12	30	3800
50(58)	390	10×19.5	3900	0.12	30	3800
50(58)	390	12.5×15	3900	0.12	40	3350
50(58)	470	10×22	4700	0.12	30	4050
50(58)	470	12.5×15	4700	0.12	40	3500
50(58)	560	12.5×17	5000	0.12	30	4300
50(58)	680	12.5×21	5000	0.12	30	4550
50(58)	820	12.5×21	5000	0.12	30	4750
63(73)	6.8	5×5.8	300	0.12	60	1350

VPL

■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
63(73)	6.8	6.3×4.5	300	0.12	60	1400
63(73)	8.2	5×5.8	300	0.12	60	1450
63(73)	8.2	6.3×4.5	300	0.12	60	1400
63(73)	10	5×7.7	300	0.12	60	1450
63(73)	10	6.3×4.5	300	0.12	60	1400
63(73)	15	5×7.7	300	0.12	60	1450
63(73)	15	6.3×5.8	300	0.12	60	1400
63(73)	22	5×9.5	300	0.12	50	1900
63(73)	22	6.3×7.7	300	0.12	50	1900
63(73)	33	6.3×8.5	416	0.12	50	1900
63(73)	33	8×7.7	416	0.12	60	1800
63(73)	39	6.3×9.5	491	0.12	50	2150
63(73)	39	8×7.7	491	0.12	60	1800
63(73)	47	6.3×11	592	0.12	40	2500
63(73)	47	8×9	592	0.12	60	1900
63(73)	56	8×9	706	0.12	50	2200
63(73)	56	10×8.5	706	0.12	60	1950
63(73)	68	8×10	857	0.12	50	2300
63(73)	68	10×8.5	857	0.12	60	2050
63(73)	82	8×12.5	1033	0.12	50	2300
63(73)	82	10×9.5	1033	0.12	60	2050
63(73)	100	8×13.5	1260	0.12	40	2700
63(73)	100	10×10.5	1260	0.12	50	2350
63(73)	120	10×13.5	1512	0.12	50	2450
63(73)	150	10×14.5	1890	0.12	40	3000
63(73)	180	10×15.5	2268	0.12	30	3600
63(73)	220	10×17	2772	0.12	30	3800
63(73)	220	12.5×13.5	2772	0.12	40	3350
63(73)	270	10×22	3402	0.12	30	4050
63(73)	270	12.5×15	3402	0.12	40	3500
63(73)	330	10×22	4158	0.12	30	4350
63(73)	330	12.5×17	4158	0.12	30	4300
63(73)	390	12.5×18.5	4914	0.12	30	4550
63(73)	470	12.5×21	5000	0.12	30	4750
80(92)	4.7	5×5.8	300	0.12	60	1350
80(92)	4.7	6.3×4.5	300	0.12	60	1400
80(92)	6.8	5×5.8	300	0.12	60	1450
80(92)	6.8	6.3×4.5	300	0.12	60	1400
80(92)	8.2	5×7.7	300	0.12	60	1450
80(92)	8.2	6.3×4.5	300	0.12	60	1400
80(92)	10	5×7.7	300	0.12	60	1450
80(92)	10	6.3×5.8	300	0.12	60	1400
80(92)	15	5×9.5	300	0.12	50	1900

VPL

■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
80(92)	15	6.3×7.7	300	0.12	50	1900
80(92)	22	6.3×8.5	352	0.12	50	1900
80(92)	22	8×7.7	352	0.12	60	1800
80(92)	33	6.3×11	528	0.12	40	2500
80(92)	33	8×7.7	528	0.12	60	1800
80(92)	39	6.3×12	624	0.12	40	2600
80(92)	39	8×9	624	0.12	50	2200
80(92)	47	8×10	752	0.12	50	2200
80(92)	47	10×8.5	752	0.12	60	2050
80(92)	56	8×12.5	896	0.12	50	2300
80(92)	56	10×9.5	896	0.12	50	2450
80(92)	68	8×12.5	1088	0.12	40	2700
80(92)	68	10×9.5	1088	0.12	50	2450
80(92)	82	8×15	1312	0.12	40	2900
80(92)	82	10×10.5	1312	0.12	50	2550
80(92)	100	8×16.5	1600	0.12	30	3500
80(92)	100	10×13.5	1600	0.12	40	2950
80(92)	120	10×15.5	1920	0.12	40	3000
80(92)	150	10×17	2400	0.12	30	3800
80(92)	150	12.5×13.5	2400	0.12	40	3350
80(92)	180	10×19.5	2880	0.12	30	4050
80(92)	180	12.5×15	2880	0.12	40	3500
80(92)	220	10×22	3520	0.12	30	4350
80(92)	220	12.5×17	3520	0.12	30	4300
80(92)	270	12.5×18.5	4320	0.12	30	4550
80(92)	330	12.5×21	5000	0.12	30	4750
100(115)	2.2	5×5.8	300	0.12	80	1200
100(115)	2.2	6.3×4.5	300	0.12	80	1250
100(115)	3.3	5×5.8	300	0.12	60	1450
100(115)	3.3	6.3×4.5	300	0.12	80	1250
100(115)	4.7	5×7.7	300	0.12	60	1450
100(115)	4.7	6.3×5.8	300	0.12	80	1350
100(115)	5.6	5×7.7	300	0.12	60	1450
100(115)	5.6	6.3×5.8	300	0.12	80	1350
100(115)	6.8	5×8.5	300	0.12	60	1550
100(115)	6.8	6.3×5.8	300	0.12	60	1650
100(115)	8.2	5×9.5	300	0.12	60	1700
100(115)	8.2	6.3×7.7	300	0.12	60	1650
100(115)	10	6.3×7.7	300	0.12	60	1650
100(115)	12	6.3×8.5	300	0.12	50	1900
100(115)	15	6.3×9.5	300	0.12	50	2150
100(115)	15	8×7.7	300	0.12	60	1800
100(115)	18	6.3×11	360	0.12	50	2250

VPL

■ Standard Size

Rated Voltage (Surge Voltage) (V)	Capacitance (μF)	Size ΦD×L(mm)	L.C. (μA,2min)	Tanδ 120Hz	ESR (mΩ100kHz)	Ripple current (mA/r.m.s) 105°C100kHz
100(115)	18	8 × 9	360	0.12	60	1900
100(115)	22	8 × 9	440	0.12	50	2200
100(115)	27	8 × 12.5	540	0.12	50	2200
100(115)	27	10 × 8.5	540	0.12	60	2050
100(115)	33	8 × 12.5	660	0.12	50	2300
100(115)	33	10 × 9.5	660	0.12	50	2450
100(115)	39	8 × 15	780	0.12	50	2400
100(115)	39	10 × 9.5	780	0.12	50	2450
100(115)	47	10 × 10.5	940	0.12	50	2550
100(115)	56	10 × 13.5	1120	0.12	50	2650
100(115)	68	10 × 17	1360	0.12	50	2700
100(115)	82	10 × 19.5	1640	0.12	40	3100
100(115)	82	12.5 × 13.5	1640	0.12	50	3000
100(115)	100	10 × 22	2000	0.12	40	3500
100(115)	100	12.5 × 15	2000	0.12	50	3150
100(115)	120	10 × 22	2400	0.12	40	3750
100(115)	120	12.5 × 17	2400	0.12	40	3700
100(115)	150	12.5 × 18.5	3000	0.12	40	3900
100(115)	180	12.5 × 21	3600	0.12	40	4100