



PW Series

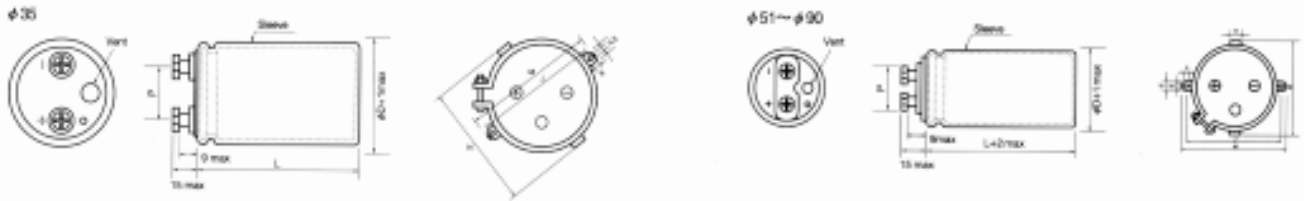
Specifications

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| <ul style="list-style-type: none"> ■ Features • Lifetime:85°C,2000hrs • Screw terminal • Large ripple current • High reliability • Large capacitance | <ul style="list-style-type: none"> ■ Recommended Applications • Computer • Converter/Inverter • Electronic Instrument • Large model power supply |
|--|---|



Items	Characteristics													
Capacitance Tolerance	-10~+50% (T) (120Hz,20°C)													
Rated Voltage Range (WV)	10~450 VDC													
Operating Temperature Range	-25 ~ +85°C													
Surge Voltage (V) (20°C)	WV	10	16	25	35	50	63	100	160	200	250	350	400	450
	SV	13	20	32	44	63	79	125	200	250	300	400	450	500
Leakage Current (Max)	I ≤ 0.02CV or 5mA whichever is smaller (After rated voltage applied for 5 minutes)													
	I= Leakage Current (μA) C= Nominal Capacitance (μF) V= Rated Voltage (V) (20°C)													
Dissipation Factor (Max) (tan δ) (120Hz, 20°C)	Dissipation Factor(tan δ) shall not exceed the values showed in the table of standard rating													
Load Life	After applying rated voltage for 2000 hours at 85°C, the capacitor shall meet the following requirement.													
	Capacitance Change	Within ± 15% of the initial value												
	Dissipation Factor	Not more than ± 150% of the specified value												
	Leakage Current	Not more than the ± 15% of specified value												
Shelf Life	After placed at 85°C without voltage applied for 500 hours, the capacitor shall meet the same requirement as load life.													
Other	Satisfied JIS C-5141													

Dimensions (mm)



Multiplier for Ripple Current

Frequency coefficient

Freq. (Hz)	50	60	120	400	1K	2.4K	5K	~10K
Coefficient	0.80	0.85	1.00	1.14	1.23	1.30	1.36	1.40

Temperature coefficient

Ambient Temperature (°C)	40	45	50	55	60	65	70	75	80	85
Coefficient	2.32	2.21	2.10	1.98	1.85	1.72	1.57	1.40	1.22	1.00



Case Size & Max Ripple Current / tan δ / ESR

CASE SIZE (φ DxL(mm)) & MAX DISSIPATION FACTOR (tanδ / 120Hz,20°C) & MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 120Hz,85°C) & MAX EQUIVALENT SERIES RESISTANCE (ESR(Ω) / 120Hz,20°C)

WV	10				16			
SPEC μ F	φDxL	tanδ	RC	ESR	φDxL	tanδ	RC	ESR
27000					35x54	1.2	5.1	0.058
33000					35x66	1.2	5.5	0.048
39000	35x54	1.2	5	0.041	35x66	1.2	6	0.041
47000	35x54	1.2	5.5	0.033	35x81	1.2	6.7	0.034
56000	35x66	1.5	6.1	0.035	35x81	1.5	7.5	0.035
68000	35x81	1.5	6.9	0.029	35x101	1.5	7.8	0.029
82000	35x81	1.5	7.8	0.024	35x101	1.5	8.1	0.024
100000	35x101	1.5	8.8	0.019	35x120	1.5	9.4	0.019
120000	35x120	1.5	9.9	0.016	51x81	1.7	10.8	0.018
150000	51x81	1.7	10.9	0.015	51x101	1.7	12.3	0.015
180000	51x81	1.7	12	0.012	51x120	1.7	13.2	0.012
220000	51x101	1.9	13.3	0.011	51x120	1.7	14.2	0.010
270000	51x120	1.9	14	0.009	64x101	2.5	15.3	0.012
330000	51x120	1.9	14.7	0.007	64x120	2.5	17.8	0.010
390000	64x101	2.5	17.2	0.008	77x101	2.8	18.7	0.009
470000	64x120	2.5	19.6	0.007	77x120	3	21.9	0.008
560000	77x101	3	20	0.007	77x144	3	27	0.007

WV	25				35			
SPEC μ F	φDxL	tanδ	RC	ESR	φDxL	tanδ	RC	ESR
15000					35x54	0.5	4.8	0.044
18000	35x54	0.6	4.9	0.044	35x66	0.5	5.2	0.036
22000	35x66	1	5.4	0.060	35x81	0.5	5.6	0.030
27000	35x81	1	5.8	0.049	35x81	0.6	6	0.029
33000	35x81	1	6.2	0.040	35x81	0.6	6.4	0.024
39000	35x81	1	6.7	0.034	35x101	0.6	7.6	0.020
47000	35x101	1	7.6	0.028	35x101	0.6	9.1	0.017
56000	35x120	1	8.2	0.023	51x81	0.9	9.9	0.021
68000	51x81	1.2	9	0.023	51x101	0.9	10.8	0.017
82000	51x81	1.2	9.9	0.019	51x101	0.9	12	0.014
100000	51x81	1.7	11.1	0.022	51x120	1.4	12.8	0.018
120000	51x81	1.7	12.3	0.018	64x101	1.4	13.6	0.015
150000	64x101	2.2	13.8	0.016	64x101	1.4	15	0.012
180000	64x101	2.4	15.4	0.017	77x120	1.7	18.4	0.012
220000	64x120	2.4	17.2	0.014	77x120	2	21	0.012
270000	77x101	2.8	19.7	0.013	77x144	2	23.1	0.010
330000	77x120	2.8	21.4	0.011	77x144	2.5	25.8	0.009



Case Size & Max Ripple Current / tan δ / ESR

CASE SIZE (φ DxL(mm)) & MAX DISSIPATION FACTOR (tanδ / 120Hz,20°C) & MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms)/ 120Hz,85°C) & MAX EQUIVALENT SERIES RESISTANCE (ESR(Ω) / 120Hz,20°C)

WV	50				63			
μ F / SPEC	φDxL	tanδ	RC	ESR	φDxL	tanδ	RC	ESR
5600					35x54	0.3	4.4	0.071
6800					35x54	0.3	4.8	0.058
8200					35x66	0.3	5.2	0.058
10000	35x54	0.4	5.1	0.053	35x81	0.4	5.8	0.053
12000	35x66	0.4	5.3	0.044	35x81	0.4	6.4	0.044
15000	35x81	0.6	5.5	0.053	35x101	0.4	7.6	0.035
18000	35x81	0.6	6.7	0.044	35x120	0.4	9	0.029
22000	35x101	0.6	7.9	0.036	51x81	0.5	9.5	0.030
27000	35x120	0.6	9.4	0.029	51x81	0.5	10	0.024
33000	51x81	0.7	9.9	0.028	51x101	0.5	11.7	0.020
39000	51x81	0.7	10.5	0.023	51x120	0.5	13.8	0.017
47000	51x101	0.7	11.4	0.019	64x101	0.6	14.5	0.016
56000	51x101	0.7	12.3	0.016	64x101	0.6	15.3	0.014
68000	51x120	0.7	14.1	0.013	64x120	0.6	16.8	0.011
82000	64x101	0.8	15.6	0.012	77x120	0.8	18.7	0.012
100000	64x120	0.8	16.4	0.010	77x120	0.8	20.7	0.010
120000	64x120	0.8	17.2	0.008	77x144	0.8	23.1	0.008

WV	80				100			
μ F / SPEC	φDxL	tanδ	RC	ESR	φDxL	tanδ	RC	ESR
3300					35x54	0.25	3.8	0.100
3900					35x54	0.25	4.2	0.085
4700	35x54	0.25	4.9	0.070	35x81	0.25	4.8	0.070
5600	65x66	0.25	5.4	0.059	35x81	0.25	5.4	0.059
6800	65x81	0.3	5.7	0.058	35x101	0.25	6.3	0.048
8200	65x81	0.3	6.1	0.048	35x120	0.25	7.6	0.040
10000	35x101	0.3	7	0.039	51x81	0.35	8.1	0.046
12000	35x120	0.3	8.2	0.033	51x81	0.35	8.7	0.038
15000	51x81	0.4	8.9	0.035	51x101	0.35	9.6	0.030
18000	51x81	0.4	9.6	0.029	51x120	0.35	10.5	0.025
22000	51x101	0.4	10.8	0.024	51x120	0.4	12	0.024
27000	51x120	0.4	12.7	0.019	64x120	0.4	14.5	0.020
33000	64x101	0.45	13.5	0.018	77x101	0.5	15.7	0.020
39000	64x101	0.45	14.4	0.015	77x120	0.5	18	0.017
47000	64x120	0.45	15.6	0.012	77x144	0.5	18.9	0.014
56000	77x120	0.6	17.5	0.012	77x144	0.5	19.8	0.011
68000	77x120	0.6	19.5	0.011	90x144	0.6	22.5	0.011



Case Size & Max Ripple Current / $\tan \delta$ / ESR

CASE SIZE (ϕ DxL(mm)) & MAX DISSIPATION FACTOR ($\tan\delta / 120\text{Hz}, 20^\circ\text{C}$) & MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 120Hz, 85°C) & MAX EQUIVALENT SERIES RESISTANCE (ESR(Ω) / 120Hz, 20°C)

WV SPEC μ F	160				200			
	ϕ DxL	$\tan\delta$	RC	ESR	ϕ DxL	$\tan\delta$	RC	ESR
8200					35x54	0.25	2.8	0.404
10000					35x66	0.25	3.1	0.331
12000	35x54	0.25	2.8	0.276	35x66	0.25	3.4	0.276
15000	35x51	0.25	3.4	0.221	35x81	0.25	3.8	0.211
18000	35x64	0.25	3.8	0.184	35x81	0.25	4.2	0.184
22000	35x81	0.25	4.2	0.150	35x101	0.25	4.8	0.150
27000	35x81	0.25	4.8	0.122	35x120	0.25	5.4	0.122
33000	35x101	0.25	5.4	0.100	51x81	0.3	6.2	0.120
39000	35x120	0.3	5.8	0.102	51x101	0.3	7	0.102
47000	51x81	0.3	6.2	0.084	51x101	0.3	7.8	0.084
56000	51x101	0.3	6.9	0.071	51x120	0.3	8.8	0.071
68000	51x101	0.3	7.6	0.058	64x101	0.35	9.3	0.068
82000	51x120	0.3	8.5	0.048	64x120	0.35	9.8	0.056
100000	64x101	0.35	9.6	0.046	64x120	0.35	11	0.046
120000	64x120	0.35	11	0.038	77x120	0.35	11.5	0.038
150000	64x120	0.35	11.3	0.030	77x144	0.35	12.4	0.030
180000	77x144	0.35	12.5	0.025	90x144	0.35	13.8	0.025

WV SPEC μ F	250				350			
	ϕ DxL	$\tan\delta$	RC	ESR	ϕ DxL	$\tan\delta$	RC	ESR
330					35x54	0.25	1.1	1.01
390					35x66	0.25	1.3	0.085
470					35x66	0.25	1.4	0.707
560	35x54	0.25	1.6	0.592	35x81	0.25	1.5	0.592
680	35x51	0.25	2	0.487	35x101	0.25	1.9	0.487
820	35x64	0.25	2.8	0.404	35x120	0.25	2.1	0.404
1000	35x81	0.25	3	0.331	35x120	0.25	2.4	0.331
1200	35x81	0.25	3.2	0.276	51x101	0.25	2.7	0.276
1500	35x101	0.25	4	0.221	51x101	0.25	3.3	0.221
1800	35x120	0.25	4.6	0.184	51x101	0.25	3.7	0.184
2200	51x81	0.3	5.2	0.180	51x120	0.25	4.4	0.150
2700	51x101	0.3	5.9	0.147	64x120	0.25	5	0.122
3300	51x101	0.3	6.6	0.120	64x120	0.25	6.1	0.100
3900	51x120	0.35	7.7	0.102	77x101	0.25	6.8	0.085
4700	64x101	0.35	8	0.098	77x120	0.25	8.1	0.070
5600	64x101	0.35	8.3	0.082	77x144	0.25	9.1	0.059
6800	64x120	0.6	9.3	0.068	90x144	0.25	11.3	0.048



Case Size & Max Ripple Current / tan δ / ESR

CASE SIZE (φ DxL(mm)) & MAX DISSIPATION FACTOR (tanδ / 120Hz,20°C) & MAX PERMISSIBLE RIPPLE CURRENT (RC(mArms) / 120Hz,85°C) & MAX EQUIVALENT SERIES RESISTANCE (ESR(Ω) / 120Hz,20°C)

WV	400				450			
SPEC μ F	φDxL	tanδ	RC	ESR	φDxL	tanδ	RC	ESR
220	35x54	0.3	1	1.81	35x66	0.3	1	1.81
270	35x66	0.3	1.1	1.48	35x66	0.3	1.1	1.48
330	35x66	0.3	1.2	1.21	35x81	0.3	1.3	1.21
390	35x81	0.3	1.3	1.02	35x101	0.3	1.5	1.02
470	35x101	0.3	1.5	0.846	35x120	0.3	1.7	0.846
560	35x120	0.3	1.7	0.710	51x81	0.3	1.9	0.710
680	35x120	0.3	2	0.585	51x81	0.3	2.2	0.585
820	51x81	0.3	2.3	0.485	51x101	0.3	2.5	0.485
1000	51x81	0.3	2.7	0.398	51x101	0.3	3	0.398
1200	51x101	0.3	3	0.331	51x120	0.3	3.4	0.331
1500	51x120	0.3	3.6	0.265	64x101	0.3	3.8	0.265
1800	64x101	0.3	4.1	0.221	64x120	0.3	4.5	0.221
2200	64x101	0.3	4.6	0.180	77x101	0.3	5.1	0.180
2700	77x101	0.3	5.5	0.147	77x120	0.3	6.2	0.147
3300	77x101	0.3	6.3	0.120	90x144	0.3	7.2	0.120
3900	77x120	0.3	7.4	0.102	90x144	0.3	8.1	0.102
4700	77x120	0.3	8.6	0.098	90x144	0.3	9.4	0.098