

Features:

- Lifetime: 105°C, 2000hrs
- High ripple current
- Extended temperature
- Snap-in terminal

Applications:

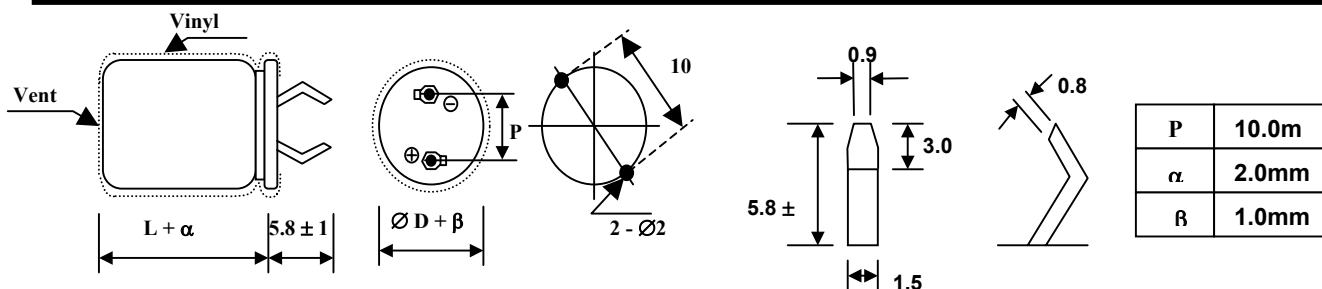
- AV(TV, Video, Audio)
- Monitor/Computer
- OA/HA/Communication
- Smoothing circuit
- Adapter
- SMPS



Specifications:

Items	Characteristics															
Capacitance Tolerance	±20% (M) (120Hz, 20□)															
Rated Voltage Range (WV)	6.3~100 VDC								160~450 VDC							
Operating Temperature Range	-40 ~ +105°C								-25 ~ +105°C							
Surge Voltage (V) (20°C)	WV	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	SV	8	13	20	32	44	63	79	125	200	250	300	400	450	500	
Leakage Current (Max) (20□)	I ≤ 0.02CV or 3mA whichever is smaller (After rated voltage applied for 5 minutes)															
	I = Leakage Current (μ A) C = Nominal Capacitance (μ F) V = Rated Voltage (V)															
Dissipation Factor (Max) (tanδ) (120Hz, 20°C)	Dissipation Factor(tanδ) shall not exceed the values showed in the table of standard rating															
Load Life	After applying rated voltage for 2000 hours at 105°C, the capacitor shall meet the following requirement.															
	Capacitance Change								Within±20% of the initial value							
	Dissipation Factor								Not more than 200% of the specified value							
	Leakage Current								Not more than the specified value							
Shelf Life	After placed at 105°C without voltage applied for 1000 hours, the capacitor shall meet the same requirement as load life.															
Applicable standards	Refer to JIS C-5101															

Dimensions (mm):



Multiplier for Ripple Current:

Frequency Coefficient

Freq. (Hz)	50	60	120	400	1K	2.4K	5K	10K~100K
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	105
Coefficient	2.73	2.60	2.47	2.33	2.18	2.02	1.85	1.65	1.44	1.18	1.00

Case Size & Max Ripple Current:

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV SPEC µF	10					16						
	ØD x L			tanδ	ESR	ØD x L			tanδ	ESR		
	RC					RC						
6800						22x25				0.5	0.098	
						1.80						
8200						22x30	25x25			0.5	0.081	
						2.05	2.05					
10000	22x25				0.5	0.066	22x35	25x30		0.5	0.066	
	1.80						2.45	2.45				
12000	22x30	25x25			0.5	0.055	22x40	25x30	30x25	0.5	0.055	
	2.05	2.05					2.73	2.60	2.68			
15000	22x35	25x30	30x25		0.5	0.044	22x45	25x35	30x30	0.5	0.044	
	2.45	2.45	2.55				2.99	2.90	3.02			
18000	22x40	25x30	30x30		0.5	0.037	22x50	25x40	30x30	35x25	0.5	0.037
	2.94	2.80	3.11				3.43	3.33	3.30	3.37		
22000	22x45	25x35	30x30	35x25	0.5	0.030		25x45	30x35	35x30	0.5	0.030
	3.24	3.15	3.28	3.37			3.70	3.70	3.81			
27000		25x40	30x35	35x30	0.5	0.025			30x40	35x35	0.5	0.025
		3.50	3.67	3.78					4.15	4.27		
33000		25x45	30x40	35x30	0.5	0.020			30x50	35x40	0.5	0.020
		4.00	4.20	4.08					4.65	4.65		
39000		25x50	30x45	35x35	0.5	0.017				35x45	0.5	0.017
		4.45	4.67	4.63						5.25		
47000				35x40	0.5	0.014				35x50	0.5	0.014
				4.90						5.80		
56000				35x45	0.5	0.012						
				5.50								
68000				35x50	0.5	0.010						
				6.05								

Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV SPEC µF	25					35						
	ØD x L			tanδ	ESR	ØD x L			tanδ	ESR		
	RC					RC						
2700						22x25				0.35	0.172	
						1.45						
3300						22x30				0.35	0.141	
						1.60						
3900	22x25				0.4	0.136	22x30			0.35	0.119	
	1.50						1.80					
4700	22x30				0.4	0.113	22x35	25x25		0.35	0.099	
	1.80						2.23	2.10				
5600	22x30	25x25			0.4	0.095	22x40	25x30	30x25	0.35	0.083	
	1.95	1.95					2.41	2.30	2.37			
6800	22x35	25x30			0.4	0.078	22x45	25x35	30x30	0.35	0.068	
	2.20	2.20					2.68	2.60	2.70			
8200	22x40	25x35	30x25		0.4	0.065	22x50	25x40	30x30	35x25	0.35	0.057
	2.47	2.50	2.45				3.02	2.93	2.90	2.96		
10000	22x45	25x40	30x30		0.4	0.053		25x45	30x35	35x30	0.35	0.046
	2.75	2.80	2.75					3.20	3.20	3.30		
12000	22x50	25x45	30x35	35x25	0.4	0.044		25x50	30x40	35x30	0.35	0.039
	3.13	3.22	3.19	3.10				3.64	3.67	3.60		
15000		25x50	30x40	35x30	0.4	0.035			30x45	35x35	0.35	0.031
		3.43	3.47	3.40					4.04	4.00		
18000			30x45	35x35	0.4	0.029				35x40	0.35	0.026
			3.94	3.90						4.60		
22000			30x50	35x40	0.4	0.024				35x50	0.35	0.021
			4.30	4.30						5.10		
27000				35x45	0.4	0.020						
				4.85								

(cont'd) Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV	50					63						
SPEC µF	ØD x L				tanδ	ESR	ØD x L			tanδ	ESR	
	RC						RC					
1200							22x25 1.25				0.25	0.276
1500	22x25 1.25				0.30	0.265	22x30 1.45	25x25 1.45			0.25	0.221
1800	22x30 1.45				0.30	0.221	22x35 1.60	25x30 1.60			0.25	0.184
2200	22x30 1.60	25x25 1.60			0.30	0.181	22x40 1.89	25x30 1.80	30x25 1.85		0.25	0.151
2700	22x35 1.80	25x30 1.80			0.30	0.147	22x45 2.06	25x35 2.00	30x30 2.08		0.25	0.123
3300	22x40 2.05	25x30 1.95	30x25 2.01		0.30	0.121		25x40 2.32	30x30 2.30	35x25 2.35	0.25	0.101
3900	22x45 2.27	25x35 2.20	30x30 2.29		0.30	0.102		25x45 2.55	30x35 2.55	35x30 2.63	0.25	0.085
4700	22x50 2.50	25x40 2.42	30x30 2.40	35x25 2.45	0.30	0.085		25x50 2.83	30x40 2.86	35x30 2.80	0.25	0.071
5600		25x45 2.70	30x35 2.70	35x30 2.78	0.30	0.071			30x45 3.18	35x35 3.15	0.25	0.059
6800			30x40 3.06	35x30 3.00	0.30	0.059			30x50 3.50	35x40 3.50	0.25	0.048
8200			30x45 3.38	35x35 3.35	0.30	0.049				35x45 3.90	0.25	0.040
10000				35x40 3.70	0.30	0.040						
12000				35x50 4.20	0.30	0.033						

(cont'd) Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV µF SPEC	80					100						
	ØD x L			tanδ	ESR	ØD x L			tanδ	ESR		
	RC					RC						
560						22x25				0.2	0.474	
						1.20						
680						22x30				0.2	0.390	
						1.35						
820	22x25				0.2	0.324	22x30	25x25		0.2	0.324	
	1.20						1.50	1.50				
1000	22x30				0.2	0.265	22x35	25x30		0.2	0.265	
	1.35						1.70	1.70				
1200	22x35	25x25			0.2	0.221	22x40	25x35	30x25	0.2	0.221	
	1.59	1.50					1.97	1.99	1.95			
1500	22x40	25x30	30x25		0.2	0.177	22x45	25x40	30x30	35x25	0.2	0.177
	1.78	1.70	1.75				2.15	2.19	2.15	2.21		
1800	22x45	25x35	30x30		0.2	0.147		25x45	30x35	35x30	0.2	0.147
	2.01	1.95	2.03					2.45	2.45	2.52		
2200		25x40	30x30	35x25	0.2	0.121		25x50	30x40	35x35	0.2	0.121
		2.17	2.15	2.19				2.75	2.75	2.86		
2700		25x45	30x35	35x30	0.2	0.098			30x45	35x35	0.2	0.098
		2.45	2.45	2.52					3.08	3.05		
3300			30x40	35x35	0.2	0.080			30x50	35x40	0.2	0.080
			2.75	2.83					3.45	3.45		
3900			30x45	35x35	0.2	0.068				35x45	0.2	0.068
			3.13	3.10						3.90		
4700				35x40	0.2	0.056				35x50	0.2	0.056
				3.40						4.30		
5600				35x50	0.2	0.047						
				3.80								

(cont'd) Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV SPEC µF	160						180					
	ØD x L				tanδ	ESR	ØD x L				tanδ	ESR
	RC						RC					
270	22x25				0.15	0.737	22x25				0.15	0.737
	0.85						0.85					
330	22x30				0.15	0.603	22x30				0.15	0.603
	1.00						1.10					
390	22x30	25x25			0.15	0.510	22x35	25x25			0.15	0.510
	1.15	1.15					1.32	1.25				
470	22x35	25x30			0.15	0.423	22x40	25x30			0.15	0.423
	1.30	1.30					1.47	1.40				
560	22x40	25x30	30x25		0.15	0.355	22x45	25x35	30x25		0.15	0.355
	1.57	1.50	1.54				1.70	1.63	1.60			
680	22x45	25x35	30x30		0.15	0.293	22x50	25x40	30x30	35x25	0.15	0.293
	1.75	1.70	1.77				1.87	1.82	1.80	1.84		
820	22x50	25x40	30x30	35x25	0.15	0.243		25x45	30x35	35x30	0.15	0.243
	2.03	1.97	1.95	1.99				2.05	2.05	2.11		
1000		25x45	30x35	35x30	0.15	0.199		25x50	30x40	35x30	0.15	0.199
		2.15	2.15	2.21				2.27	2.29	2.25		
1200			30x40	35x35	0.15	0.166			30x45	35x35	0.15	0.166
			2.45	2.52					2.57	2.55		
1500			30x50	35x40	0.15	0.133				35x40	0.15	0.133
			2.75	2.75						2.85		
1800				35x45	0.15	0.111				35x50	0.15	0.111
				3.00						3.10		
2200				35x50	0.15	0.090						
				3.50								

(cont'd) Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV SPEC µF	200						250					
	ØD x L				tanδ	ESR	ØD x L				tanδ	ESR
	RC						RC					
150							22x25 0.75				0.15	1.33
180							22x30 0.85				0.15	1.11
220	22x25 0.85				0.15	0.905	22x30 1.00	25x25 1.00			0.15	0.905
270	22x30 1.00				0.15	0.737	22x35 1.22	25x25 1.15			0.15	0.737
330	22x30 1.15	25x25 1.15			0.15	0.603	22x40 1.36	25x30 1.30			0.15	0.603
390	22x35 1.30	25x30 1.30			0.15	0.510	22x45 1.54	25x35 1.48	30x25 1.45	35x25 1.59	0.15	0.510
470	22x40 1.52	25x30 1.45	30x25 1.49		0.15	0.423	22x50 1.78	25x35 1.65	30x30 1.72	35x30 1.88	0.15	0.423
560	22x45 1.70	25x35 1.65	30x30 1.72		0.15	0.355		25x40 1.80	30x35 1.89	35x30 1.94	0.15	0.355
680		25x40 1.87	30x30 1.85	35x25 1.89	0.15	0.293		25x50 2.10	30x40 2.10	35x35 2.18	0.15	0.293
820		25x50 2.20	30x35 2.10	35x30 2.16	0.15	0.243			30x45 2.30	35x40 2.39	0.15	0.243
1000			30x45 2.32	35x35 2.30	0.15	0.199			30x50 2.55	35x45 2.65	0.15	0.199
1200			30x50 2.75	35x40 2.75	0.15	0.166				35x50 2.90	0.15	0.166
1500				35x45 2.90	0.15	0.133						

(cont'd) Case Size & Max Ripple Current: (cont'd from previous page)

Case Size (ØDxL(mm)) & Max Permissible Ripple Current (RC(mArms) / 120Hz,85°C)

WV SPEC µF	400					450						
	ØD x L				tanδ	ESR	ØD x L				tanδ	ESR
	RC						RC					
56							22x25				0.15	3.56
							0.55					
68	22x25				0.15	2.93	22x30				0.15	2.93
	0.55						0.65					
82	22x30	25x25			0.15	2.43	22x30	25x25			0.15	2.43
	0.65	0.65					0.75	0.75				
100	22x35	25x25			0.15	1.99	22x40	25x30			0.15	1.99
	0.79	0.75					0.89	0.85				
120	22x40	25x30	30x25		0.15	1.66	22x45	25x35	30x25		0.15	1.66
	0.89	0.85	0.87				0.95	0.92	0.90			
150	22x45	25x35	30x30	35x25	0.15	1.33	22x50	25x40	30x30		0.15	1.33
	0.93	0.90	0.94	0.96			1.14	1.11	1.10			
180	22x50	25x40	30x30	35x25	0.15	1.11		25x45	30x35	35x25	0.15	1.11
	1.14	1.11	1.10	1.12				1.25	1.24	1.20		
220		25x45	30x35	35x30	0.15	0.905		25x50	30x40	35x30	0.15	0.905
		1.20	1.20	1.24				1.36	1.38	1.35		
270		25x50	30x40	35x30	0.15	0.737			30x45	35x35	0.15	0.737
		1.36	1.38	1.35					1.51	1.50		
330			30x45	35x35	0.15	0.603			30x50	35x40	0.15	0.603
			1.51	1.50					1.70	1.70		
390			30x50	35x40	0.15	0.510				35x45	0.15	0.510
			1.70	1.70						1.90		
470				35x45	0.15	0.423				35x50	0.15	0.423
				1.90						2.10		