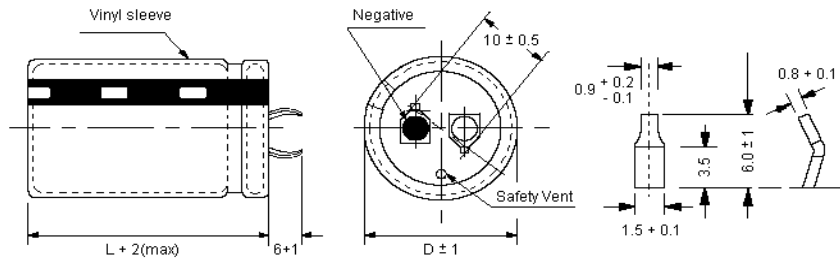


■ **FEATURES**

- ◆ Standard snap-in terminal spacing fixed at 10mm which can be mounted to PCB directly without holder
- ◆ With high ripple current endurance
- ◆ Applications for use in power supplies, OA equipment, TV set and audio as a filter

■ **OUTLINE**



P.C.B. Terminal (SNAP-IN)

■ **SPECIFICATIONS**

Items	Characteristics														
Capacitance Tolerance (120Hz, 25°C)	± 20% (M)														
Rated Working Voltage Range	10 ~ 100Vdc							160 ~ 450Vdc							
Operation Temperature	-40°C ~ +85°C							-25°C ~ +85°C							
Leakage Current (25°C)	(After 2 minutes applying the DC working voltage)							(After 5 minutes applying the DC working voltage)							
	I ≤ 0.01CV (uA)							I ≤ 0.03CV (uA)							
◆ I : Leakage Current (uA)      ◆ C : Rated Capacitance (uF)      ◆ V : Working Voltage (V)															
Surge Voltage (25°C)	W.V.	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	S.V.	13	20	32	44	50	63	79	125	200	250	300	400	450	500
Dissipation Factor (120Hz, 25°C)	W.V.	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	tan δ	0.55	0.50	0.45	0.45	0.35	0.30	0.25	0.20	0.15	0.15	0.15	0.20	0.20	0.20
Temperature Characteristics	W.V.	10	16	25	35	40	50	63	100	160	200	250	350	400	450
	- 25°C / + 25°C	4	4	3	3	2	2	2	2	4	4	4	4	4	8
	- 40°C / + 25°C	15	15	10	8	6	6	5	5	-	-	-	-	-	-
◆ Impedance ratio at 120Hz															
Load Test	After 2000 hours application of WV at +85°C, the capacitor shall meet the following limits:														
	Capacitance Change	≤ ± 20% of initial value													
	tan δ	≤ 150% of initial specified value													
	Leakage Current	≤ initial specified value													
Shelf Test	After 1000 hours, no voltage applied at +85°C, the capacitor shall meet the following limits:														
	Capacitance Change	≤ ± 20% of initial value													
	tan δ	≤ 150% of initial specified value													
	Leakage Current	≤ 200% of initial specified value													



**■ DIMENSIONS**

**D x L (mm)**

uF	WV	10						16									
		22		25		30		35		22		25		30		35	
8200										22x25	2.30						
10000										22x30	2.53						
12000		22x25	2.17							22x30	2.82	22x25	2.66				
15000		22x30	2.59	25x25	2.59					22x35	3.32	25x30	3.28	30x25	3.36		
18000		22x30	2.89	25x25	2.77					22x40	3.58	25x35	3.58	30x30	3.48		
22000		22x35	3.41	25x30	3.29	30x25	3.18			22x50	4.07	25x40	4.00	30x30	3.94		
27000		22x40	3.64	25x35	3.64	30x30	3.59					25x45	4.48	30x35	4.34	35x30	4.34
33000		22x50	4.12	25x40	4.10	30x30	4.12					25x50	4.94	30x40	4.84	35x30	4.80
39000				25x45	4.76	30x35	4.69	35x30	4.55					30x45	5.50	35x35	5.41
47000				25x50	5.20	30x40	5.20	35x35	5.17					30x50	6.12	35x40	6.12
56000						30x45	5.93	35x35	5.76							35x45	6.86
68000						30x50	6.75	35x40	6.73								
82000								35x50	7.65								

uF	WV	25						35									
		22		25		30		35		22		25		30		35	
3900										22x25	2.00						
4700										22x30	2.21	25x25	2.19				
5600		22x25	2.08							22x30	2.51	25x25	2.48				
6800		22x30	2.30							22x35	2.60	25x30	2.60	30x25	2.78		
8200		22x35	2.53	25x25	2.50					22x40	3.12	25x35	3.00	30x30	2.96		
10000		22x35	2.86	25x30	2.84					22x45	3.23	25x40	3.23	30x30	3.25		
12000		22x40	3.18	25x35	3.13	30x25	3.18					25x45	3.61	30x35	3.61	35x30	3.62
15000		22x50	3.67	25x40	3.60	30x30	3.60					25x50	4.30	30x40	4.32	35x30	4.32
18000				25x45	4.21	30x35	4.19	35x30	4.21					30x45	4.66	35x35	5.14
22000						30x40	4.68	35x35	4.69					30x50	5.74	35x40	5.74
27000						30x45	5.42	35x40	5.42							35x45	6.21
33000								34x45	6.08							35x50	6.35
39000								35x50	6.80								

uF	WV	25						35									
		22		25		30		35		22		25		30		35	
1800										22x25	1.71						
2200		22x25	1.73							22x30	2.11	25x25	2.07				
2700		22x30	1.99							22x35	2.25	25x30	2.24				
3300		22x30	2.17	22x25	2.14					22x40	2.42	25x35	2.41	30x25	2.50		
3900		22x235	2.45	25x30	2.41					22x45	2.79	25x35	2.78	30x30	2.78		
4700		22x40	2.71	25x30	2.73	30x25	2.71			22x50	3.14	25x40	3.03	30x30	3.03		
5600		22x45	3.09	25x35	3.03	30x30	3.09					25x45	3.42	30x35	3.43	35x30	3.38
6800		22x50	3.55	25x40	3.48	30x30	3.48					25x50	3.96	30x40	3.97	35x35	3.90
8200				25x45	3.71	30x35	3.75	35x30	3.75					30x45	4.41	35x35	4.40
10000				25x50	4.20	30x40	4.27	35x30	4.18					30x50	4.66	35x40	4.64
12000						30x45	4.48	35x35	4.48							35x50	5.04
15000								35x40	5.15								
18000								35x50	5.36								

uF	WV	80						100									
		22		25		30		35		22		25		30		35	
820										22x25	1.48						
1000										22x30	1.61	25x25	1.61				
1200		22x25	1.59							22x35	1.70	25x30	1.68				
1500		22x30	1.71							22x40	1.96	25x35	1.94	30x30	1.94		
1800		22x35	1.80	25x25	1.81					22x45	2.22	25x40	2.22	30x30	2.15		
2200		22x40	2.27	25x30	2.27	30x25	2.24			22x50	2.65	25x40	2.72	30x35	2.63		
2700		22x45	2.64	25x35	2.64	30x30	2.62					25x50	3.06	30x40	3.05	35x35	3.09
3300		22x50	2.93	25x40	2.93	30x30	2.91							30x45	3.45	35x35	3.45
3900				25x45	3.26	30x35	3.26							30x50	3.68	35x40	3.68
4700				25x50	3.64	30x40	3.53	35x30	3.49							35x45	3.92
5600						30x45	3.87	35x35	3.84							35x50	4.10
6800						30x50	4.44	35x40	4.40								
8200								35x45	4.95								

Case Size D x L (mm) ↑ ↑ Max Ripple Current A (rms)/120Hz 85°C



■ **DIMENSIONS**

**D x L (mm)**

uF	WV	Item	160				200							
			22	25	30	35	22	25	30	35				
270								22x25	1.24					
330		22x25	1.45					22x30	1.41	25x25	1.36			
390		22x30	1.55	25x25	1.57			22x30	1.57	25x25	1.55			
470		22x30	1.77	25x25	1.77			22x40	1.79	25x30	1.75	30x25	1.76	
560		22x35	1.94	25x30	1.94	30x25	1.95	22x40	1.98	25x35	1.95	30x30	1.95	
680		22x40	2.13	25x35	2.15	30x25	2.15	22x45	2.24	25x40	2.22	30x30	2.18	
820		22x50	2.42	25x40	2.40	30x30	2.40			25x45	2.55	30x35	2.53	35x30
1000				25x45	2.74	30x35	2.72	35x30	2.68	25x50	2.96	30x40	2.94	35x30
1200				25x50	3.10	30x40	3.08	35x30	3.07			30x45	3.27	35x35
1500						30x45	3.58	35x35	3.52					35x45
1800						30x50	4.15	35x40	4.15					35x50
2200								35x45	4.50					

uF	WV	Item	250				350							
			22	25	30	35	22	25	30	35				
100								22X25	0.73					
120								22X25	0.86					
150		22X25	0.94					22X30	1.08	25X25	1.10			
180		22X5	1.08					22X35	1.21	25X30	1.23			
220		22X30	1.14	25X25	1.12			22X40	1.33	25X35	1.36	30X25	1.37	
270		22X33	1.28	25X25	1.36			22X45	1.54	25X40	1.57	30X30	1.62	35X25
330		22X35	1.52	25X30	1.50	30X25	1.45			25X45	1.69	30X35	1.79	35X30
390		22X40	1.74	25X35	1.70	30X25	1.70			25X50	1.94	30X40	2.02	35X35
470		22X45	1.95	25X40	1.95	30X30	1.84					30X45	2.28	35X40
560				25X45	2.24	30X35	2.12	35X25	2.12			30X50	2.47	35X45
680				25X50	2.41	30X40	2.45	35X30	2.45					35X50
820						30X45	2.73	35X35	2.72					
1000						30X50	3.22	35X40	3.14					
1200								35X45	3.61					
1500								35X50	3.91					

uF	WV	Item	400				450							
			22	25	30	35	22	25	30	35				
47		22X25	0.46					22X25	0.42					
56		22X25	0.58					22X25	0.55					
68		22X25	0.67					22X25	0.64					
82		22X25	0.76					22X30	0.78					
100		22X30	0.89	25X25	1.12			22X35	0.85	25X30	0.87			
120		22X30	0.99	25X25	1.36			22X40	0.97	25X35	0.99	30X25	1.02	
150		22X35	1.12	25X30	1.50	30X25	1.15	22X45	1.06	25X40	1.13	30X30	1.16	
180		22X40	1.27	25X35	1.70	30X25	1.40			25X45	1.26	30X35	1.30	35X30
220		22X45	1.43	25X40	1.95	30X30	1.51			25X50	1.43	30X45	1.47	35X30
270				25X45	2.24	30X35	1.64	35X30	1.64			30X50	1.71	35X35
330				25X50	2.41	30X40	1.85	35X30	1.85				1.91	35X40
390						30X45	2.04	35X35	2.06					35X45
470						30X50	2.28	35X40	2.30					35X50
560								35X45	2.57					
680								35X50	2.80					

■ **RIPPLE CURRENT COEFFICIENTS**

Temperature(°C)	45	65	85	105
Multiplier	2.40	2.15	1.70	1.00

Frequency	60(50)	120	1K	10K	100K
WV	Multiplier				
47 ~ 330	0.90	1.00	1.05	1.10	1.10
39 ~ 1000	0.90	1.00	1.15	1.20	.120
40 ~ 1000	0.80	1.00	1.35	1.45	1.50
1000 ~ 4700	0.80	1.00	1.10	1.15	1.15