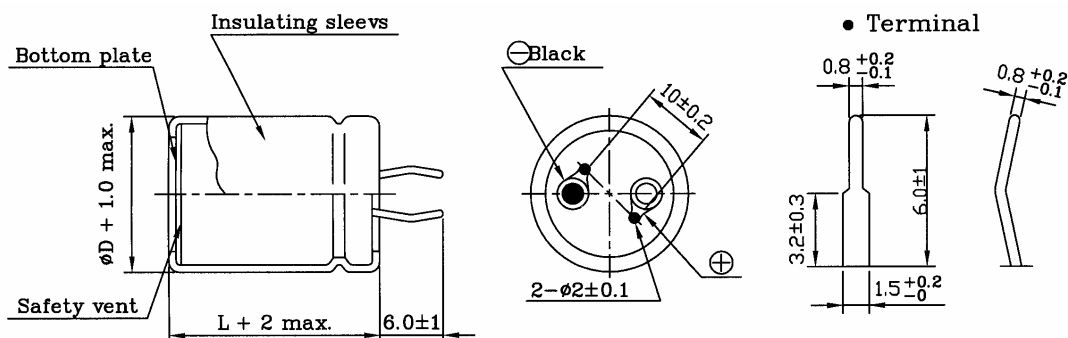


- 105°C 2000 hours assured life.
- Directly mountable on printed circuit board without holders.
- Smaller low profile sizes than ordinary capacitors.
- Aluminum case designed explosion-proof vent.

**Characteristics**

<b>Voltage Range</b>	16 ~ 100V	160 ~ 450V						
<b>Capacitance Range</b>	470 ~ 47000uF	330 ~ 2200uF						
<b>Temperature Range</b>	-40 ~ +105°C	-25 ~ +105°C						
<b>Capacitance Tolerance</b>	±20% at 120Hz, 20°C (10% Tol. is available upon request)							
<b>Leakage Current</b>	$I = 3\sqrt{CV}$ uA max C: Capacitance, V:W.V. (After 5 minutes)							
<b>Dissipation Factor (tan δ) (at 20°C, 120Hz)</b>	Less than the value under table (%)							
	uF \\\ W.V.	10 ~ 16	25 ~ 35	50 ~ 63	80 ~ 100	160 ~ 250	350 ~ 450	
	47 ~ 390	-	-	-	15	15	20	
	470 ~ 3900	25	20	20	20	15	20	
	4700 ~ 8200	35	30	30	25			
	10000 ~ 22000	40	35	30				
27000 ~ 47000	45	40	35					
<b>Stability at Low Temperature</b>	Impedance ration at 120Hz between the -25°C or -40°C value and 20°C value shall not exceed :							
	Rated Voltage (V)	16	25	35~100	160~200	250~350	400	450
	Z-25°C/Z 20°C	5	4	4	4	4	8	8
	Z-40°C/Z 20°C	15	15	12	-	-	-	-
<b>Load Life</b>	The following specifications shall satisfied when the capacitors are restored to 20°C after rated working voltage applied for 2,000 hours at max. operating temperature with the rated ripple current.							
	Capacitance change	≤ ±20% of the initial value.						
	Dissipation factor	≤ ±200% of the initial specified value						
	Leakage current	≤ The initial specified value.						
<b>Shelf Life</b>	After storage for 1000 hours at 105°C with no voltage applied, the capacitor shall meet the specified limit in load life.							

**Diagram of dimensions**



**Multiplier for R.C. vs Temperature**

Temp.(°C)	45	60	85	95	105
Multiplier	2.10	1.90	1.40	1.25	1.00

**Multiplier for Ripple Current VS Frequency**

Cap.(uF) \\\ (Hz)	60	120	1K	10K	50K - 100K
10 < Cap. ≤ 100	0.8	1	1.36	1.48	1.53
100 < Cap. ≤ 1000	0.8	1	1.25	1.35	1.38
1000 < Cap.	0.8	1	1.17	1.25	1.28

**Standard Products Table**

W.V(DC)	CAP. (μF)	Ripple Current A max. 105°C, 120Hz	Dimensions A		Dimensions B		Dimensions C	
			D φ	L	D φ	L	D φ	L
16	6800	2.02	22	30	-		-	
	10000	2.79	22	30	25	25	-	
	15000	3.24	22	50	25	40	30	35
	22000	4.08	25	45	30	40	-	
	33000	4.83	30	45	35	35	-	
	47000	6.32	35	45	-		-	
25	4700	1.92	22	25	-		-	
	6800	2.60	22	30	25	25	-	
	10000	3.50	22	40	25	35	30	30
	15000	4.58	25	45	30	35	-	
	22000	5.12	30	45	35	35	-	
	33000	6.09	35	50	-		-	
35	3300	1.84	22	25	-		-	
	4700	2.42	22	30	25	25	-	
	6800	3.24	22	40	25	35	30	30
	10000	3.96	25	45	30	35	-	
	15000	4.69	30	45	35	35	-	
	22000	5.50	35	50	-		-	
50	2200	1.65	22	30	25	25	-	
	3300	2.24	22	35	25	30	-	
	4700	2.95	22	45	25	40	30	30
	6800	3.26	25	50	30	40	-	
	10000	4.11	30	50	35	40	-	
	15000	5.05	35	50	-		-	
63	2200	1.65	22	35	25	30	-	
	3300	2.48	22	50	25	40	30	30
	4700	3.43	25	50	30	40	-	
	6800	4.64	30	50	35	40	-	
	10000	5.75	35	50	-		-	
80	1000	1.16	22	35	25	30	-	
	1500	1.74	22	40	25	35	30	30
	2200	2.25	22	50	25	45	30	35
	3300	3.30	30	50	35	40	-	
	4700	4.29	30	50	35	40	-	
	6800	5.66	35	50	-		-	
100	470	0.79	22	25	-		-	
	680	1.02	22	30	-		-	
	1000	1.38	22	35	25	25	-	
	1500	1.83	22	45	25	40	30	30
	2200	3.03	25	50	30	40	-	
	3300	4.59	30	50	35	40	-	
	4700	5.43	35	50	-		-	

**Standard Products Table**

W.V(DC)	CAP. (μF)	Ripple Current A max. 105°C, 120Hz	Dimensions A		Dimensions B		Dimensions C	
			D φ	L	D φ	L	D φ	L
160	330	0.98	22	25	-		-	
	470	1.21	22	35	25	25	-	
	680	1.64	22	45	25	40	-	
	1000	2.15	25	45	30	40	-	
	1500	2.80	30	50	35	40	-	
	2200	3.39	35	50	-		-	
200	220	0.92	22	25	-		-	
	330	1.21	22	35	25	30	-	
	470	1.62	22	40	25	30	-	
	680	2.04	25	40	30	30	30	35
	1000	2.70	30	45	35	35	-	
	1500	3.43	35	50	-		-	
250	220	1.00	22	30	25	25	-	
	330	1.28	22	40	25	30	-	
	470	1.76	22	50	25	40	30	30
	680	2.22	25	50	30	40	35	35
	1000	2.80	35	45	-		-	
350	100	0.69	22	30	25	30	-	
	150	0.82	22	40	25	35	-	
	220	1.00	22	50	30	30	30	35
	330	1.35	30	40	35	35	-	
	470	1.70	35	40	-		-	
400	47	0.56	22	25	-		-	
	68	0.72	22	25	-		-	
	100	0.82	22	35	25	25	25	30
	150	0.98	22	45	25	30	25	40
	220	1.21	25	40	25	50	30	35
	330	1.57	30	50	35	40	-	
	470	1.98	30	50	35	45	-	
450	47	0.60	22	25	-		-	
	68	0.80	22	35	25	30	-	
	100	0.90	22	40	25	25	25	30
	150	1.05	22	50	25	40	30	30
	220	1.24	25	50	30	35	30	40
	330	1.64	30	50	35	45	-	
	470	1.70	35	50	-		-	