

## Features

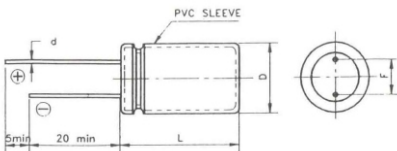
- Load life of 5,000 hours at 85°C.
- Very low leakage current.
- Can be replacement for tantalum capacitor.
- Case size larger than 5mm diameter has safety vents.



## Specifications

Item	Characteristics									
Operating temperature range	-40~+85°C									
Rated voltage range	6.3~100V									
Capacitance range	0.1-10,000 μ F									
Capacitance tolerance (at 20°C, 120Hz)	±20%(M)									
Leakage current(I) (at 20°C)	After 1 minute application of rated voltage. I ≤ 0.002CV or 0.4 μ A, whichever is greater Where C: Nominal capacitance in μ F, V: Rated voltage in V.									
Dissipation factor(Tan δ) (at 20°C, 120Hz)	W.V.(V)	6.3	10	16	25	35	50	63	100	
	Tan δ (max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	
For capacitance of more than 1,000 μ F, add 0.02 for every increase of 1,000 μ F.										
Low temperature characteristics (at 120Hz)	W.V.(v)			6.3		10~16		25~100		
	impedance ratio	Z-25°C/Z+20°C			4		3		2	
	ZT/Z+20°C(max)	Z-40°C/Z+20°C			8		6		4	
Load life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage has been applied for 2,000 hours at 85°C.									
	Capacitance change			≤20% of the initial value						
	tan δ			≤200% of the initial specified value						
	I			≤The initial specified value						
Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 85°C for 500 hours without voltage applied									
	Capacitance change			≤20% of the initial value						
	tan δ			≤150% of the initial specified value						
	I			≤200% of the initial specified value						
Others	Satisfies characteristic W of JIS C5141									

## Dimensions



D±0.5	5	6.3	8	10	13	16	18	22						
L	±1.0				±2.0									
	11	11	12	12	16	20	20	25	25	30	35	35	40	35
F±0.5	2.0	2.5	3.5	5.0			7.5			10.0				
d±0.05	0.5		0.6			0.8								

## Ripple Current Multipliers

### Frequency multiplying factor

Cap.(μ F)	Freq(Hz)				
	50	120	300	1k	10k
0.1~47	0.75	1.00	1.35	1.57	2.00
100~470	0.80	1.00	1.23	1.34	1.50
1,000~15,000	0.85	1.00	1.10	1.13	1.15

### Temperature multiplying factor

Temperature(°C)	45	65	85
Factor	1.59	1.23	1.00

**Case Size DxL(mm) and Maximun Ripple current(mA rms/at 85°C,120Hz)**

W.V.(v) Cap.(μ F)	6.3	10	16	25	35	50	63	100
0.1						5×11 1.3		5×11 2.7
0.22						5×11 2.9		5×11 5.9
0.33						5×11 4.4		5×11 8.8
0.47						5×11 6.3		5×11 11
1						5×11 13		5×11 16
2.2						5×11 22		5×11 24
3.3						5×11 27		5×11 30
4.7						5×11 32	5×11 34	5×11 36
10				5×11 39	5×11 42	5×11 47	5×11 49	6.3×11 59
22		5×11 49	5×11 55	5×11 58	5×11 63	6.3×11 79	6.3×11 83	10×12 119
33	5×11 55	5×11 60	5×11 67	5×11 71	6.3×11 88	6.3×11 96	8×12 121	10×16 165
47	5×11 65	5×11 71	5×11 80	6.3×11 97	6.3×11 105	8×12 137	10×12 164	10×16 196
100	5×11 95	6.3×11 118	6.3×11 132	8×12 169	10×12 207	10×16 256	10×16 270	13×20 366
220	6.3×11 160	8×12 209	8×12 266	10×16 321	10×16 347	10×20 419	13×20 512	16×25 673
330	8×12 234	10×12 291	10×16 368	10×16 393	10×20 469	13×20 595	13×25 691	16×30 892
470	10×12 317	10×16 393	10×16 439	10×20 518	13×20 648	13×25 782	16×25 927	18×35 1,218
1,000	10×16 523	10×20 632	13×20 819	13×25 965	16×25 1,172	16×30 1,390	18×35 1,675	22×40 2,107
2,200	13×20 952	13×25 1,141	16×25 1,419	16×30 1,629	18×35 1,991	22×35 2,408		
3,300	13×25 1,239	16×25 1,505	16×30 1,785	18×35 2,151	22×35 2,554			
4,700	16×25 1,580	16×30 1,833	18×35 2,271	22×35 2,660				
10,000	18×35 2,451	22×35 2,885						

Note:10×12 can also be 8×15 as percustomer's request.