

Features

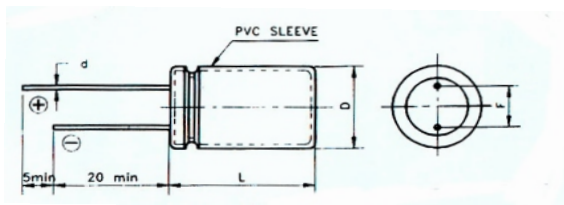
- Load life of 2,000 hours at 85°C.
- Bi-polar, suitable for use in circuits whose polarity is sometimes reversed or unknown.
- Case Size larger than 5mm diameter has safety vents.



Specifications

Item	Characteristics						
Operating temperature range	-40~+85℃						
Rated voltage range	6.3~100V						
Capacitance range	0.1-4,700 μ F						
Capacitance tolerance (at20℃,120Hz)	±20%(M)						
Leakage current(I) (at20℃)	After 2 minutes application of rated voltage. I≤0.003CV +3 μ A Where C: Nominal capacitance in μ F,V:Rated voltage in V.						
Dissipation factor(Tan δ) (at 20℃,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
	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 ZT/Z+20℃(max)	Z-25℃/Z+20℃		4		3	
		Z-40℃/Z+20℃		8		6	
Load life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage has been applied for 2,000 hours at 85℃.with the polarity inverted every 250 hours.						
	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℃ after exposing them at 85℃ 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
L	± 1.0			± 2.0			
	11	11	12	12	16	20	20
F ± 0.5	2.0	2.5	3.5	5.0	7.5	10.0	12.5
d ± 0.05	0.5	0.5	0.6	0.6	0.8	0.8	0.8

Ripple Current Multipliers

Frequency multiplying factor

Freq(Hz)	50	120	300	1k	10k
Cap.(μF)					
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
1,000~4,700	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	10
1											5×11	12			5×11	15
2.2											5×11	18	5×11	20	5×11	22
3.3											5×11	23	5×11	24	6.3×11	30
4.7							5×11	23	5×11	25	5×11	27	5×11	29	6.3×11	36
10					5×11	33	5×11	33	5×11	37	5×11	39	6.3×11	48	6.3×11	36
22			5×11	45	5×11	49	5×11	49	6.3×11	62	6.3×11	66	8×12	85	8×12	63
33	5×11	55	5×11	55	5×11	60	6.3×11	68	6.3×11	76	8×12	97	10×12	119	10×16	120
47	5×11	65	5×11	65	6.3×11	81	6.3×11	81	8×12	108	10×12	131	10×16	160	10×20	162
100	6.3×11	108	6.3×11	108	8×12	141	10×12	160	10×12	179	10×16	217	10×20	258	13×20	224
220	8×12	191	8×12	191	10×12	238	10×16	269	10×20	331	13×20	410	13×20	443	13×25	361
330	8×12	234	10×12	266	10×16	329	10×20	363	13×20	470	13×20	503	16×25	673	16×30	652
470	10×12	317	10×16	359	10×20	433	13×20	502	13×20	561	16×25	744	16×30	870		
1,000	10×20	577	10×20	668	13×20	732	13×25	807	16×25	1,015	18×35	1,343				
2,200	13×20	952	13×25	1,050	16×25	1,283	16×35	1,488								
3,300	13×25	1,239	16×25	1,393	16×35	1,745										
4,700	16×25	1,580	16×35	1,832												

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