

FEATURES

1. 105℃ Resistance to lightning products resistance high reliability and long life.
2. Suitable for office communicative or industrial equipments

SPECIFICATIONS

Item	Performance Characteristics																			
Operating Temperature Range	-40 to +105℃																			
Rated Working voltage Range				160 to 450V DC																
Nominal Capacitance Range	0.47- 22000(uF)																			
Capacitance Tolerance	± 20% （120Hz, +20℃ ）																			
Leakage Current	I≤0.01CV or 3(uA)Whichever is greater			I≤0.03CV+40(uA)																
	after 2 minutes application of rated working voltage at +20℃																			
Dissipation Factor tan δ	<table border="1"><tr><td>Working voltage(V)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>tan δ (max.)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td></tr></table> For capacitance value >1000uF add 0.02per another 1000uF						Working voltage(V)	160	200	250	350	400	450	tan δ (max.)	0.15	0.15	0.15	0.15	0.15	0.15
Working voltage(V)							160	200	250	350	400	450								
tan δ (max.)							0.15	0.15	0.15	0.15	0.15	0.15								
(120Hz+20℃)																				
Ripple Current	Refer to standard products table (120Hz,+105℃) Correction factor for frequency																			
	Voltage (V)	Freq(Hz) CAP(uF)_	50Hz	120Hz	300Hz	1kHz	10kHz ~													
	160~450	0.47~220	0.80	1.00	1.25	1.40	1.60													
		330~1000	0.90	1.00	1.10	1.13	1.15													
Multiplier for Ripple Current vs. Temperature	<table border="1"><tr><td>Temperature℃</td><td>45</td><td>60</td><td>70</td><td>85</td><td>105</td></tr><tr><td>Multiplier</td><td>2. 10</td><td>1. 90</td><td>1. 40</td><td>1. 25</td><td>1. 00</td></tr></table>						Temperature℃	45	60	70	85	105	Multiplier	2. 10	1. 90	1. 40	1. 25	1. 00		
	Temperature℃	45	60	70	85	105														
Multiplier	2. 10	1. 90	1. 40	1. 25	1. 00															
Low Temperature Characteristics	Impedance ratio max. at 120Hz																			
	<table border="1"><tr><td>Working voltage(V)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Z-40℃/Z+20℃</td><td>3</td><td>3</td><td>4</td><td>4</td><td>6</td><td>15</td></tr></table>						Working voltage(V)	160	200	250	350	400	450	Z-40℃/Z+20℃	3	3	4	4	6	15
	Working voltage(V)	160	200	250	350	400	450													
Z-40℃/Z+20℃	3	3	4	4	6	15														
For capacitance value >1000uF Add0.5 per another 1000uF for Z-25℃/Z+20℃ Add1.0 per another 1000uF for Z-40℃/Z+20℃																				

High temperature Loading	Test conditions Duration : 2000 hours Ambient temperature : +105℃ Applied voltage : DC voltage with maximum permissible ripple current specified at +105℃ (Sum of the DC voltage and superimposed pea AC voltage for maximum permissible ripple current should be equal to rated DC working voltage) Post test requirements at +20℃ Leakage current : ≤ Initial specified value Capacitance change : ≤ ± 20% of initial measured value tan δ : ≤ 200% of initial specified value
Shelf life	Test conditions Duration : 1000 hours Ambient temperature : +105℃ Applied voltage : (None) Post test requirements at +20℃ Same Limits for high temperature loading
Resistance to lightning	surge of lightning strikes 4-6KV
Others	JIS C-5141 JIS C-5102

CASE SIZE TABLE

Unit:mm

D φ	5	6.3	8	10	13	16	18	22
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
d φ ±0.05	0.5			0.6		0.8		

aMAX

(L<20)1.5

(L≥20)2.0

BMAX

(D<20)0.5

(D≥20)1.0

DIMENSIONS

ΦD×L(mm)

Cap.(uF)	WV(SV)	160V(200)		200V(250)		250V(300)		350V(400)		400V(450)	
		2C		2D		2E		2V		2G	
2.2	225	6.3×11	29	6.3×11	29	8×12	35	8×12	40	8×12	50
3.3	335	8×12	37	8×12	45	8×12	51	8×12	45	8×12	55
4.7	475	8×12	50	10×12.5	60	8×12	58	10×12.	58	10×12.	62
10	106	10×12.5	85	10×15	90	10×15	116	10×20	146	13×21	169
22	226	10×15	140	10×20	150	13×21	175	13×21	170	13×25	190
33	336	10×20	180	13×21	210	13×21	230	13×25	210	16×22	250
47	476	13×21	250	13×21	280	13×25	290	16×26	330	16×30	340
100	107	16×26	380	16×30	500	16×22	320	16×26	360	18×26	360
220	227	18×36	680	18×40	830	16×30	400	18×26	430	18×32	600
330	337	18×40	1200	22×40	1400	16×36	510	18×32	560	18×36	670
470	477	22×40	1300	22×50	1450			18×36	660	18×40	780
560	567	22×40	1410	22×50	1550						
680	687	22×50	1520	25×50	1620						
820	827			25×50	1750						
1000	108	25×50	2550								
2200	228										
3300	338									Case size	Allowable ripple

Allowable Ripple (mA rms) at 105℃ 120HZ

SPECIALLY SIZE

- 1 105 high-temperature and high voltage 350-450WV, life 2000hrs.
- 2 Specially Size, 10~16mm diameter.
- 3 For LCD-TV and LCD-Monitor power

ΦD×L(mm)

Cap.(uF)	WV(SV)	350V(400)		400V(450)		450V(500)	
		2V		2G		2W	
33	336			10×40	260	10×40	300
						13×35	310
39	396	13×30	280	10×45	310	10×50	360
				13×35	320	13×40	370
47	476	10×40	310	10×50	340	10×55	380
		13×35	330	13×40	360	13×50	410
68	686	10×50	410	13×50	410	13×55	520
		13×40	440	16×35	430	16×40	450
82	826	13×50	460	13×55	540	13×60	610
		16×35	510	16×40	560	16×45	630
100	107	16×40	540	16×45	730	16×50	770
						Case size	Allowable ripple

Allowable Ripple (mA rms) at 105℃ 120HZ