FEATURESS

1、High temperature and long load life

SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature Range	-40 to +105℃	
Rated Working voltage Range	10 to 100V DC	160 to 450V DC
Nominal Capacitance Range	3.3 to 3300(uF)	
Capacitance Tolerance	±20%（120Hz，+20℃）	
Leakage Current	I≤0.01CV or 4(uA)after 2 minutes whichever is grated working voltage at +20℃	I≤0.03CV+40(uA) or 4(uA)after 2 minutes whichever is greater measured with rated working voltage at +20℃

Dissipation Factor tan δ (120Hz+20℃)

Working voltage(V)	6.3	10	16	25	35	50	63	100
Tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08

Working voltage(V)	160	200	250	350	400	450
Tan δ (max.)	0.15	0.15	0.15	0.15	0.15	0.15

For capacitance value >1000uF add 0.02per another 1000uF

Maximum permissible ripple current

Refer to standard produce table (120HZ,+105℃)Correction factor for frequency

V	Freq.(Hz) / CAP(uF)	50	120	300	1k	10k~
6.3~100	~47	0.	1.00	1.35	1.	2.00
	100~470	750.	1.00	1.23	571.	1.50
	1000~15000	800.	1.00	1.10	341.	1.15
160~450	0.47~220	850.	1.00	1.25	131.	1.60
	270~330	800.	1.00	1.10	401.	1.15

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Multiplier for Ripple Current vs. Temperature

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

Working voltage(V)	6.3	10	16	25	35	50	63	100
Z-25℃/Z+20℃	5	4	3	2	2	2	2	2
Z-40℃/Z+20℃	12	10	8	5	4	3	3	3

Working voltage(V)	160	200	250	350	400	450
Z-40℃/Z+20℃	3	3	4	4	6	15

For capacitance value>1000uF:Add 0.5 per another 1000uF for Z-25℃/Z+20℃
Add 1.0 per another 1000uF for Z-25℃/Z+20℃

High Temperature Loading

Test conditions
Duration : ΦD8～10Φ:8000 hours , ΦD＞10Φ:10000 hours
Ambient temperature :+105℃
Applied voltage :Rated DC working voltage
Post test requirements at +20℃
Leakage current : ≤ Initial specified value
Capacitance change : ≤±25% of initial measured value
tan δ : ≤200% of initial specified value

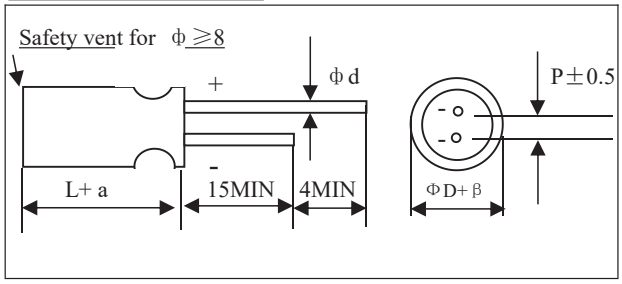
Shelf life

Test conditions
Duration :1000 hours
Ambient temperature :+105℃
Applied voltage : (None)
Post test requirements at +20℃
Leakage current : ≤ Initial specified value
Capacitance change : ≤±20% of initial measured value
tan δ : ≤200% of initial specified value

Others	JIS C-5141 JIS C-5102

CASE SIZE TABLE

Unit:mm



DΦ	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
dΦ（±0.05）	0.5			0.6		0.8		

aMAX	(L＜20)1.5
	(L≥20)2.0

β MAX	(D<20)0.5
	(D≥20)1.0

DIMENSIONS

ΦD×L(mm)

WV（SV）		10V(13)		16V(20)		25V(32)		35V(44)		50V(63)	
Cap.(uF)	Code	1A		1C		1E		1V		1H	
100	107									10×17	525
220	227							10×20	690	13×21	1080
330	337			10×15	530	10×17	685	13×21	990	13×25	1250
470	477	10×12.5	530	10×17	590	13×21	725	13×25	1240	16×26	1400
680	687	10×17	690	10×20	840	13×25	820	16×26	1600	16×30	1770
1000	108	10×20	980	13×21	880	13×21	1800	16×30	1900	18×30	2060
						16×26	1890				
2200	228	13×25	1510	16×26	1930	16×30	2270				
3300	338	16×26	1850	16×30	2210	18×36	2600			Case size	Allowable ripple

Allowable Ripple（mA rms）at105℃ 120HZ

WV(SV)		63V(79)		100V(125)		160V(200)		200V(250)		250(300)	
Cap.(uF)	Code	1J		2A		2C		2D		2E	
3.3	335									10×12.5	80
4.7	475									10×15	95
10	106					10×15	125	10×20	150	10×20	225
22	226					10×20	195	10×25	365	13×21	360
33	336					10×25	420	13×21	470	13×25	270
47	476			10×25	535	13×21	550	13×25	570	16×26	635
68	686	10×17	520	13×21	615	13×25	665	13×25	770	16×30	790
100	107	10×25	660	13×25	790	16×26	980	16×30	990	18×36	1080
220	227	13×25	1290	16×30	1370	16×35	1100	18×36	1175		
330	337	16×26	1370	18×36	1570	18×36	1430				
470	477	16×30	1600	18×40	1680						
680	687	18×30	1970								
1000	108	18×36	2160							Case size	Allowable ripple

llowable Ripple（mA rms）at105℃ 120HZ

ΦD×L(mm)

WV(SV)		350(400)		400V(450)		450V(500)	
Cap.(uF)	Code	2V		2G		2W	
2.2	225			10×12.5	55	10×15	65
3.3	335	10×12.5	85	10×15	90	10×20	100
4.7	475	10×17	102	10×20	120	13×21	110
10	106	10×20	145	13×21	155	13×25	215
22	226	13×21	278	13×25	280	16×26	450
33	336	16×26	440	16×26	455	16×30	470
47	476	16×30	565	16×30	580	18×30	680
68	686	18×30	940	18×32	955	18×36	745
100	107	18×36	990	22×35	1010	22×40	870
120	127					Case size	Allowable ripple

Allowable Ripple（mA rms）at105℃ 120HZ