General Purpose Aluminum Electrolytic Capacitor 105℃

SPKE01(105℃) Series

- Used in communication equipments,switching power supply,etc.
- Safety vent construction design.
- For the special designing requirement,please contact us.

■ Specifications

Item	Performance Characteristics	
Operating Temperature Range	-40 to +105℃	-25 to +105℃
Rated Voltage Range	6.3 to 100VDC	160 to 450VDC
Capacitance Range	0.1 to 22000uF	0.47 to 330uF
Capacitance Tolerance	±20%(120Hz,+20℃)	
Leakage Current (+20℃,max)	I≤0.01CV or 3(uA) After 2 minutes,whichever is greater measured with rated working voltage	I≤0.03CV or 3(uA) After 2 minutes,with rated working voltage applied.
Dissipation Factor(tan δ)		

Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
D.F.(%)max	22	17	15	14	12	10	9	8	12	12	12	15	15	17

For Capacitance>1000uF,add 2% per another 1000uF.(-20℃,at 120Hz)

Low Temperature Characteristics (120Hz)	impedance radio max.

Working Voltage(VDC)	6.3	10	16	25	35	50	63	100
Z-25℃/Z+20℃	4	3	2	2	2	2	2	2
Z-40℃/Z+20℃	8	6	4	3	3	3	3	3

Working Voltage(VDC)	160	200	250	350	400	450
Z-25℃/Z+20℃	2	2	3	5	6	15

For Capacitance>1000uF,add 0.5 per another 1000uF.for -25℃/+20℃,add 1 per another 1000uF.for -40℃/+20℃

Load Life

Test conditions
Duration time : 2000Hrs
Ambient temperature : +105℃
Applied voltage : Rated DC working voltage
After test requirements at +20℃
Capacitance change : ≤±20% of the initial measured value
Dissipation factor : ≤200% of the initial specified value
Leakage current : ≤The initial specified value

Shelf Life

Test conditions
Duration time : 1000Hrs
Ambient temperature : +105℃
Applied voltage : None
After test requirements at +20℃ : Same limits as Load life
Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes

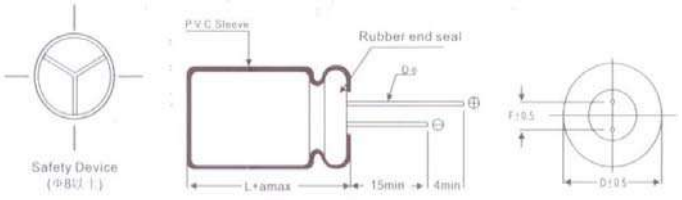
■ Multiplier for Ripple Current vs.Frequency

CAP(uF) \ Frequency(Hz)	50(60)	120	400	1K	10K	50K~100K
CAP≤10	0.8	1	1.30	1.45	1.65	1.70
10<CAP≤100	0.8	1	1.23	1.36	1.48	1.53
100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38
1000<CAP	0.8	1	1.11	1.17	1.25	1.28

■ Multiplier for Ripple Current vs.Temperature

Temperature(℃)	45	60	70	85	105
Multiplier	2.1	1.9	1.4	1.25	1

■ Diagram of Dimensions:(unit:mm)



Dø	5	6.3	8	10	13	16	18	22	25
F	2.0	3.5	3.5	5.0	5.0	7.5	7.5	10	12.5
dø	0.5			0.6		0.8			1
a	1.0			1.5					2.0

General Purpose Aluminum Electrolytic Capacitor 105℃

■ Case Size,E.S.R & Max Ripple Current

Case Size : D×L (mm)
Max ripple current : mA (rms)

E.S.R : Ω 25℃ 120Hz
(R.C) : 105℃ 120Hz

WV / Cap.(uf)	6.3V			10V			16V		
	Size	E.S.R	R.C	Size	E.S.R	R.C	Size	E.S.R	R.C
47							5×11	6.05	80
68	5×11	6.65	83	5×11	5.54	83	5×11	4.41	85
100	5×11	3.98	95	5×11	3.32	100	5×11	2.82	120
220	6.3×11	1.81	150	6.3×11	1.51	170	6.3×11	1.28	195
330	6.3×11	1.21	190	6.3×11	1.01	235	8×12	0.85	265
470	6.3×11	0.85	245	8×12	0.17	275	8×12	0.62	370
680	8×12	0.62	314	8×12	0.52	350	8×14	0.44	480
1000	8×12	0.4	410	8×14	0.33	550	10×17	0.28	645
2200	10×20	0.2	730	10×20	0.17	780	13×21	0.14	1000
3300	13×21	0.14	845	13×21	0.12	1030	13×25	0.11	1200
4700	13×26	0.11	1240	13×31	0.1	1400	16×31	0.09	1510
6800	16×26	0.09	1370	16×31	0.08	1610	16×35	0.07	1620
10000	16×31	0.07	1620	18×35	0.06	1860	22×32	0.06	1950
15000	18×35	0.06	2030	18×42	0.05	2150			

WV / Cap.(uf)	25V			35V			50V		
	Size	E.S.R	R.C	Size	E.S.R	R.C	Size	E.S.R	R.C
0.1~0.47							5×11	352.74	8
0.68							5×11	259.26	9
1.0							5×11	165.79	13
2.2							5×11	75.36	20
3.3							5×11	50.24	25
4.7							5×11	35.27	30
6.8							5×11	25.92	37
10	5×11	24.87	38	5×11	16.58	41	5×11	16.58	46
22	5×11	11.3	57	5×11	7.54	61	5×11	7.54	68
33	5×11	7.54	69	5×11	6.03	75	6.3×11	5.02	90
47	5×11	5.29	106	6.3×11	4.23	110	6.3×11	3.53	125
68	6.3×11	3.89	114	6.3×11	3.11	121	8×12	2.59	144
100	8×11	2.49	145	8×12	1.99	140	8×12	1.66	180
220	8×12	1.13	225	8×12	0.99	250	10×17	0.75	315
330	8×14	0.75	330	8×16	0.60	396	10×17	0.5	460
470	8×14	0.53	400	10×17	0.42	520	13×21	0.35	600
680	10×17	0.39	520	10×20	0.31	590	13×21	0.26	740
1000	10×20	0.25	775	13×21	0.20	860	13×26	0.17	960
2200	16×26	0.13	1100	16×31	0.11	1260	18×31	0.09	1480
3300	16×26	0.1	1320	16×32	0.08	1610	18×35	0.07	1760
4700	16×31	0.08	1580	18×40	0.07	1820	22×40	0.05	1925
6800	18×35	0.06	1730	22×40	0.05	2016	25×40	0.04	2174
10000	22×36	0.04	2150	25×42	0.03	2300	25×50	0.03	2900

General Purpose Aluminum Electrolytic Capacitor 105℃

■ Case Size,E.S.R & Max Ripple Current

Case Size : D×L (mm)
Max ripple current : mA (rms)

E.S.R : Ω 25℃ 120Hz
(R.C) : 105℃ 120Hz

WV / Cap.(uf)	63V			100V			160V		
	Size	E.S.R	R.C	Size	E.S.R	R.C	Size	E.S.R	R.C
0.47				5×11	282.19	10	6.3×11	705.47	11
1				5×11	132.63	15	6.3×11	331.57	16
2.2				5×11	60.29	23	6.3×11	150.72	23
3.3				5×11	40.19	30	6.3×11	100.48	33
4.7				5×11	28.22	31	8×12	70.55	31
10	5×11	16.58	50	6.3×11	13.26	56	10×12	33.16	60
22	6.3×11	7.54	82	8×12	6.03	94	10×17	15.07	96
33	6.3×11	5.02	100	10×13	4.02	120	10×20	10.05	140
47	8×12	3.53	135	10×17	2.82	150	13×21	7.06	165
100	10×16	1.66	215	13×21	1.33	250	16×26	3.32	270
220	10×17	0.75	390	16×26	0.60	450	18×35	1.51	450
330	13×21	0.5	500	16×26	0.40	625	18×40	1.01	995
470	13×21	0.35	700	16×35	0.28	780	22×40	0.23	1340
1000	16×26	0.17	1120						
2200	22×32	0.08	1512						

WV / Cap.(uf)	200V			250V			350V		
	Size	E.S.R	R.C	Size	E.S.R	R.C	Size	E.S.R	R.C
0.47	6.3×11	705.57	12	6.3×11	793.65	13	6.3×11	881.47	14
1	6.3×11	331.57	17	6.3×11	373.02	18	8×12	414.47	19
2.2	6.3×11	150.72	24	8×12	169.55	26	10×12	188.39	28
3.3	8×12	100.48	36	10×12	113.04	38	10×17	125.6	40
4.7	10×12	70.55	55	10×12	79.36	55	10×17	88.18	65
10	10×17	33.16	94	10×17	37.32	105	10×20	41.45	115
22	10×20	15.07	170	13×21	16.95	170	13×25	18.84	185
33	13×21	10.05	205	13×25	11.32	230	16×26	12.56	275
47	13×21	7.06	270	13×25	7.94	295	16×26	8.52	325
100	16×31	3.32	475	16×35	3.73	515	18×36	4.15	530
220	18×36	1.51	740	18×40	1.05	825			
330	22×35	1.01	1070	22×40	0.95	1160			
470	22×40	0.92	1350						

WV / Cap.(uf)	400V			450V		
	Size	E.S.R	R.C	Size	E.S.R	R.C
0.47	6.3×11	881.84	15	8×12	970.05	16
1	8×12	414.47	19	10×12	455.96	21
2.2	8×12	188.39	28	10×13	207.25	32
3.3	8×12	125.6	40	13×13	150.75	44
4.7	8×12	88.18	65	10×20	115.63	56
6.8	10×17	64.82	71	13×21	84.25	76
10	10×20	41.45	115	13×21	53.88	125
22	16×26	18.84	205	16×30	24.55	165
33	16×26	12.56	275	16×32	16.35	215
47	16×26	8.82	350	18×32	11.45	265
100	18×36	4.15	530	22×45	5.80	520