

ALUMINUM ELECTROLYTIC CAPACITORS

AK Series Higher temperature range & Long Life

■ Features : 125℃ 2000~5000hrs , High Temperature and Long Life

■ Recommended Applications:

Applicable for Electronic Ballast, Lighting Ballast

■ Corresponding product to RoHS

AH

↑
AH

Higher temperature



Specifications

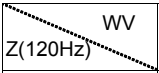
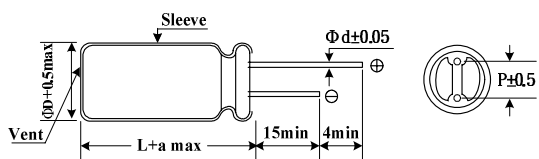
Item	Characteristics								
Operating Temperature Range	-40 ~ +125℃						-25 ~ +125℃		
Rated Voltage Range	10~63VDC						160~450VDC		
Rated Capacitance Range	47~ 4700 μ F						1~150 μ F		
Capacitance Tolerance	$\pm$ 20 % at 120Hz , 20℃								
Leakage Current (MAX) (20℃)	I=0.01CV or 3(μ A) ,whichever is greater.						I=0.1CV+40 μ A (CV $\leq$ 1000)		
							I=0.04CV+100 μ A (CV>1000)		
	(After rated voltage applied for 2 minutes) I= Leakage Current (μ A) C= Nominal Capacitance (μ F) V= Rated Voltage (V) (20℃)								
Dissipation Factor (MAX) (tan δ) (120Hz ,20℃)	WV	10	16	25	35	50	63	160~250	350~450
	tan δ	0.20	0.16	0.14	0.12	0.10	0.09	0.20	0.24
	When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with increase of every 1000uF.								
Low Temperature Stability Impedance Ratio (MAX)		10	16	25	35	50	63	160~250	350~450
	Z-25℃ / Z+20℃	3	2	2	2	2	2	3	6
	Z-40℃ / Z+20℃	6	4	4	4	4	3	-	-
Endurance	After applying rated voltage for 2000~5000hours at 125℃ , the capacitors shall meet the following requirements.								
	Capacitance Change	Within $\pm$ 30 % of initial value					Within $\pm$ 20 % of initial value		
	Dissipation Factor	$\leq$ 300% of initial specified value					$\leq$ 200% of the initial specified value		
	Leakage Current	$\leq$ initial specified value or less					$\leq$ initial specified value		
	8 Φ	10 Φ		$\geq$ 13 Φ		2000Hrs			
2000Hrs	3000Hrs		5000Hrs						
Shelf Life	After leaving capacitors under no load at 125℃ for 1000 hours.								
	Capacitance Change	Within $\pm$ 30 % of initial value					Within $\pm$ 20 % of initial value		
	Dissipation Factor	$\leq$ 300% of initial specified value					$\leq$ 200% of the initial specified value		
	Leakage Current	$\leq$ 500% of initial specified value					$\leq$ 500% of the initial specified value		

Diagram of Dimensions



ψD	8	10	13	16	18
P	3.5	5.0	5.0	7.5	7.5
ψd	0.6	0.6	0.6	0.8	0.8
a	1.5	1.5	2.0	2.0	2.0

Multiplier for Ripple Current

Frequency coefficient

Frequency (Hz)		120	1K	10K	50K~100K
10~63WV	CAP ≤ 10	0.40	0.75	0.90	1.00
	10<CAP ≤ 100	0.50	0.85	0.95	1.00
	100<CAP ≤ 1000	0.60	0.88	0.96	1.00
	1000<CAP	0.75	0.90	0.98	1.00
160~450WV	CAP ≤ 33	1.00	1.50	1.75	1.80
	CAP ≥ 47	1.00	1.30	1.40	1.50

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AK

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Series

■Dimensions, Rated Ripple Current

Capacitance (μ F)	Rated Voltage(V)											
	10(13)			16(20)			25(32)			35(44)		
	Size	Ripple	ESR	Size	Ripple	ESR	Size	Ripple	ESR	Size	Ripple	ESR
100							8x11	340	0.200	10x12.5	340	0.140
220	8x11	340	0.200	8x11	340	0.200	10x12.5	500	0.140	10x16	500	0.090
330	10x12.5	500	0.140	10x12.5	500	0.140	10x16	630	0.090	10x20	770	0.070
470	10x16	630	0.090	10x20	770	0.070	10x20	770	0.070	13x20	920	0.042
1000	10x20	770	0.070	13x20	920	0.042	13x25	1250	0.038	16x25	1380	0.028
2200	13x25	1250	0.038	16x25	1380	0.028	16x32	1450	0.025			
3300	16x25	1380	0.028	16x32	1450	0.025						
4700	16x32	1450	0.025	18x32	1720	0.018						

Capacitance (μ F)	Rated Voltage(V)					
	50(63)			63(79)		
	Size	Ripple	ESR	Size	Ripple	ESR
47	8x11	245	0.680	8x11	245	0.680
100	10x12.5	415	0.360	10x15	455	0.300
220	10x20	491	0.180	13x20	665	0.120
330	13x20	665	0.120	13x25	995	0.100
470	13x25	995	0.100	16x25	1000	0.084
1000	16x32	1280	0.078			

Capacitance (μ F)	Rated Voltage(V)											
	160(200)		200(250)		250(300)		350(400)		400(450)		450(500)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1.0							8x11	25	10x12.5	28	8x16	25
2.2					8x11	28	10x12.5	32	10x16	35	10x16	32
3.3	8x11	28	8x11	28	10x12.5	32	10x16	45	10x16	42	10x20	40
4.7	10x12.5	40	10x12.5	40	10x16	45	10 × 20	53	10 × 20	53	10 × 25	58
10	10x16	60	10 × 20	78	10 × 20	78	10 × 25	85	10 × 25	86	13 × 20	86
22	10 × 20	115	10 × 25	126	13 × 20	128	13 × 25	139	13 × 30	142	16 × 25	154
33	10 × 25	154	13 × 20	157	13 × 25	171	16 × 25	189	16 × 25	189	16 × 32	203
47	13 × 20	187	13 × 25	204	16 × 25	225	16 × 32	243	16 × 32	243		
68	13 × 25	245	16 × 20	250	16 × 32	292						
100	16 × 25	329	16 × 25	329								
150	16 × 32	434										

☆ Size: D ϕ x L (mm) ☆ Ripple Current: 125°C, 100KHz(mA/rms) ☆ ESR(Ω): 20°C, 100KHz