

AK series

- Protective countermeasure against DC over-voltage, 105°C 2000hours.
- RoHS Compliance.
- DC過電壓安全對策 105°C 2000小時。



SPECIFICATIONS

Items 項目	Characteristics 特性	
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)	
Operating Temperature Range 適用溫度範圍	-25 ~ +105°C	
Rated Voltage Range 額定電壓範圍	200VDC ~ 400VDC	
Leakage Current 洩漏電流	$I \leq 0.04CV + 100$ (µA) (After 1 minutes application of DC rated voltage, at 20 °C)	
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C	
	Rated Voltage(V)	200 400
	tan δ(Max)	0.15 0.15
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.	
	Rated Voltage(V)	200 400
	Z(-25°C)/Z(20°C)	4 6
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C.	
	Capacitance Change	Within ± 20% of Initial Value
	tan δ	200% or less of the Initial Specified Value
	Leakage Current	Initial Specified Value or less
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.	
	Capacitance Change	Within ± 20% of Initial Value
	tan δ	200% or less of Initial Specified Value
	Leakage Current	Initial Specified Value or less
Standards 參照標準	JIS C 5101-4 (IEC 60384)	

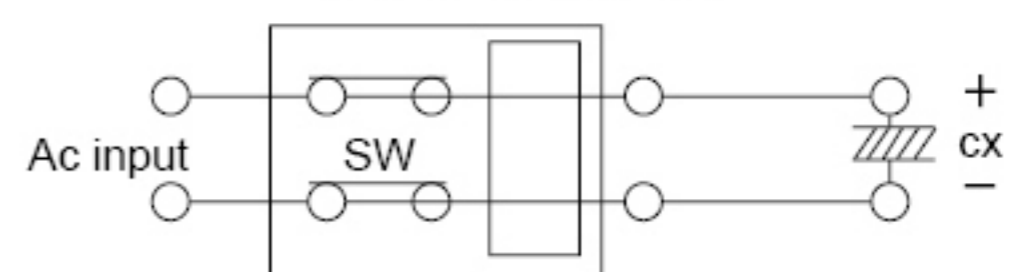
◆ DC over voltage test conditions

The vent will be operated and the capacitor shall become an open circuit without burning materials when the following excess DC voltage is applied.

TEST DC VOLTAGE

Rated Voltage	Current Limit	Test DC Voltage
200 Vdc	4A	300 / 375 Vdc
400 Vdc	2A	500 / 600 Vdc

TEST CIRCUIT



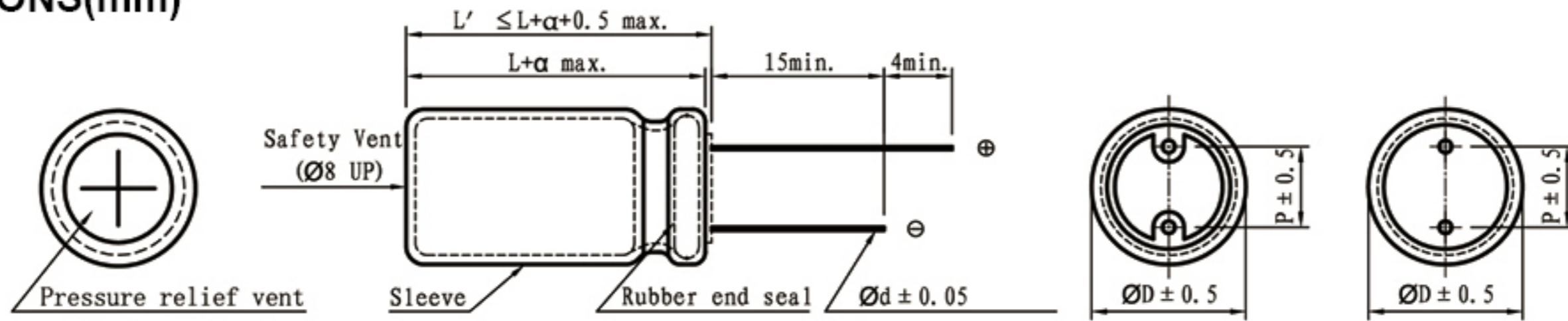
Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Capacitance (µF)	Frequency (Hz)				
		60(50)	120	150	1K	≥10K
200	22 ~ 470	0.85	1.00	1.30	1.50	1.85
	4.7 ~ 68	0.85	1.00	1.20	1.30	1.50
400	82 ~ 220	0.85	1.00	1.10	1.15	1.20

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

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DIMENSIONS(mm)



ϕD	10	13	16	18	20	22
P	5.0	5.0	7.5	7.5	10	10
ϕd	0.6	0.6	0.8	0.8	0.8	0.8

α	(L < 16) 1.0 (L ≥ 16) 2.0
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STANDARD RATINGS

D×L (mm) ; R.C.(mA rms) at 105°C 120Hz

V	Cap (μF)	D x L	R.C.
200	22	10x20	120
		10x25	160
	33	13x21	160
		10x30	195
	47	13x21	195
		13x25	210
	56	13x25	250
		68	16x22
	82		13x32
		16x22	285
		16x26	305
	100	13x35	335
		16x26	335
		16x36	350
		18x21	335
	120	16x26	450
		16x32	500
		18x25	500
	150	16x32	560
		16x36	585
		18x21	560
	180	18x25	585
		16x36	600
		16x40	645
	220	18x32	645
		18x32	680
		18x35	700
	330	18x40	735
18x35		775	
18x40		810	
390	18x45	920	
	18x40	850	
	22x40	920	
470	18x45	1120	
	22x40	1270	

V	Cap (μF)	D x L	R.C.
400	4.7	10x10	60
		10x13	63
	10	10x16	87
		10x20	105
	15	10x25	115
		18	13x25
	13x30		145
	16x22		145
	22	16x26	180
		13x25	175
		16x26	195
	33	18x21	225
		18x25	255
		13x32	370
		16x26	268
	47	16x32	275
		16x36	290
		18x21	275
		18x25	290
		18x32	310
	56	16x32	326
		16x36	338
		16x40	350
		18x32	320
		68	16x36
	16x40		360
	18x25		350
	18x32		360
	18x35		380
	82	16x32	395
		18x25	395
		18x32	400
100	18x40	420	
	18x28	450	
	18x32	470	
	18x35	490	
120	18x40	510	
	18x32	515	
	18x35	530	
150	18x40	550	
	18x35	770	
180	18x40	790	
	22x35	800	
220	22x40	1000	

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