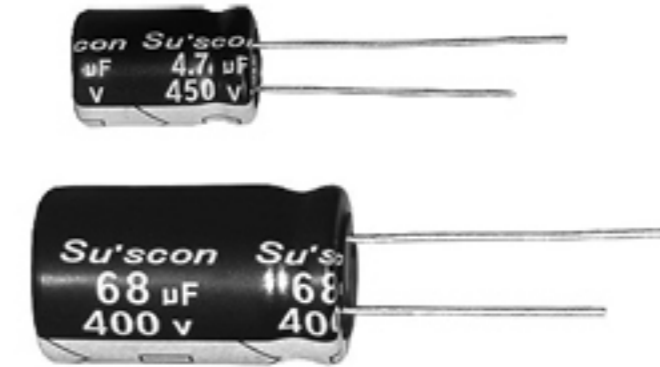


HA series

- 105°C high-temperature resistance, standard product.
- 3000 hours Load Life.
- Suitable for LED and electronic rectifier.
- RoHS Compliance
- 105°C耐高溫標準品。
- 壽命3000小時。
- 適用於節能燈與電子整流器。



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	-40 ~ +105°C			-25 ~ +105°C			
Rated Voltage Range 額定電壓範圍	160 ~ 400VDC			450VDC			
Leakage Current 洩漏電流	I ≤ 0.02CV + 10 (µA) (After 2 minutes application of DC rated voltage, at 20 °C)			I ≤ 0.03CV + 10 (µA) (After 2 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)	160~180	200	250	350	400	450
	tan δ(Max)	0.15	0.15	0.15	0.15	0.20	0.20
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.						
	Rated Voltage(V)	160	200	250	350	400	450
	Z(-25°C)/Z(20°C)	3	3	3	5	5	6
	Z(-40°C)/Z(20°C)	6	6	6	6	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 3,000 hours at 105°C.						
	Capacitance Change	Within ± 20% of Initial Value					
	tan δ	200% or less of 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	500% or less of Initial Specified Value					
Standards 參照標準	JIS C 5101-4 (IEC 60384)						

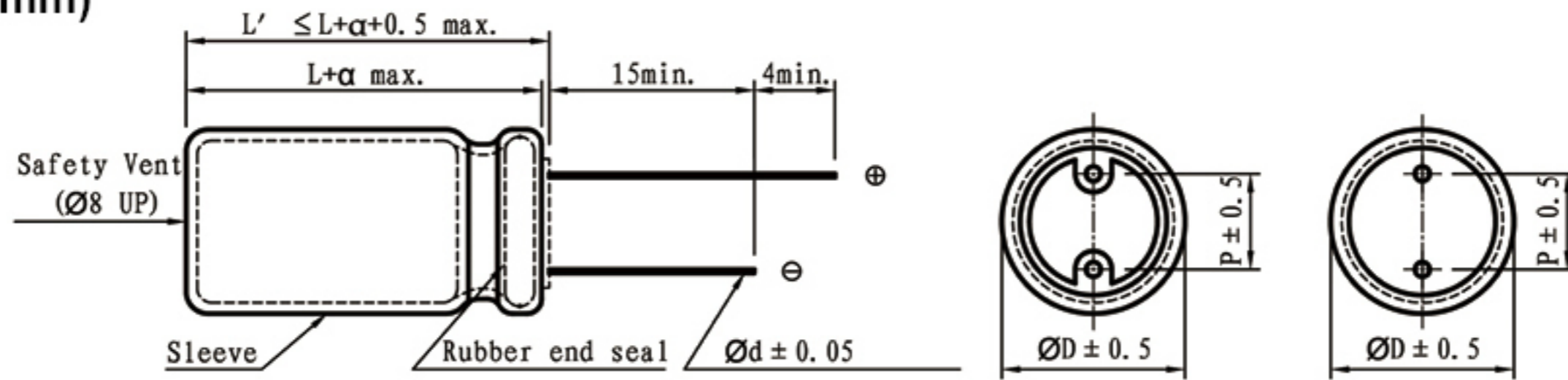
Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Frequency (Hz)			
	120	1K	10K ~ 20K	30K ~ 100K
160 ~ 250	0.55	0.85	0.90	1.00
350 ~ 450	0.50	0.80	0.90	1.00

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.

HA series

DIMENSIONS(mm)



ϕD	6.3	8	10	13	16	18
P	2.5	3.5	5.0	5.0	7.5	7.5
ϕd	0.5	0.5	0.6	0.6	0.8	0.8

α	(L < 16) 1.0 (L \geq 16) 2.0
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STANDARD RATINGS

DxL(mm) ; R.C.(mA rms) at 105°C 100KHz.

Cap (μF)	V Item	160		200		250	
		D x L	R.C.	D x L	R.C.	D x L	R.C.
2.2		6.3x11	36	6.3x11	38	8x12	47
3.3		8x12	50	8x12	59	8x12	69
4.7		8x12	55	8x12	65	8x12	70
5.6		8x12	65	8x12	75	8x16	85
6.8		8x12	70	8x14	80	10x13	95
8.2		8x12	80	8x16	85	10x16	105
10		8x12	85	10x13	120	10x16	150
15		8x16	120	10x13	150	10x16	180
22		10x16	195	10x16	210	10x20	250
33		10x20	230	13x21	280	13x21	320
47		13x21	310	13x21	395	13x25	410
68		13x21	380	13x25	460	16x26	480
82		13x25	430	13x25	570	16x26	590
100		16x26	640	16x26	670	16x32	720
150		16x26	700	16x32	790	18x32	875
220		16x36	990	18x35	1040	18x40	1100

Cap (μF)	V Item	350		400		450	
		D x L	R.C.	D x L	R.C.	D x L	R.C.
1		8x12	33	8x12	35	8x16	30
1.5		8x12	42	8x12	45	10x16	50
2.2		8x12	47	8x12	55	10x16	60
3.3		8x16	60	10x13	75	10x16	90
4.7		10x13	95	10x16	100	10x20	115
6.8		10x13	100	10x16	125	13x21	130
8.2		10x16	130	10x20	145	13x21	155
10		10x20	145	10x20	150	13x21	160
15		13x21	205	13x21	210	13x21	255
22		13x25	270	13x25	285	16x26	280
33		16x26	355	16x26	400	16x32	455
47		16x26	430	16x26	480	18x32	550
68		16x32	505	16x32	585	18x35	690
82		16x36	655	18x32	695	18x35	805
100		18x32	750	18x35	795	18x40	860

※ 13mm may be replaced by 12.5mm upon customer's request.

HA