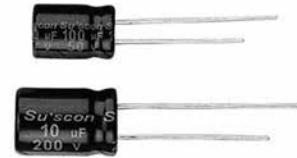


HE series

- High ripple current.
- 8000~10000 hours long life product.
- RoHS Compliance
- 高紋波電流。
- 8000~10000小時長壽命品。



SPECIFICATIONS

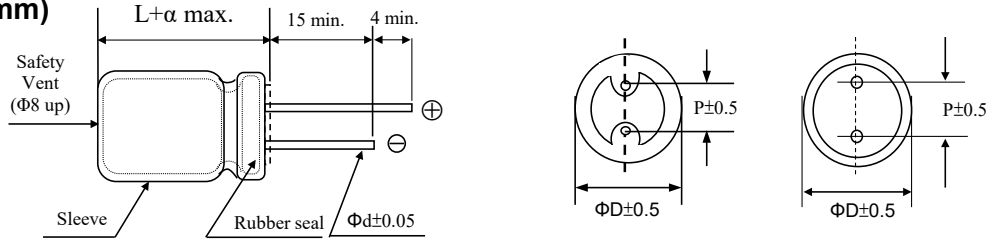
Items 項目	Characteristics 特性							
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)							
Operating Temperature Range 適用溫度範圍	-40 ~ +105°C				-25 ~ +105°C			
Rated Voltage Range 額定電壓範圍	160 ~ 400VDC				450VDC			
Leakage Current 洩漏電流	$I \leq 0.04CV + 100 (\mu A)$ (After 1 minutes application of DC rated voltage, at 20 °C)							
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C							
	Rated Voltage(V)	160	200	250	350	400	420	450
	tan δ (Max)	0.15	0.15	0.15	0.20	0.20	0.20	0.20
When nominal capacitance over 1000 μ F, tan δ shall be added 0.02 to the listed value with increase of every 1000 μ F.								
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	6	6	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 10,000 hours($\Phi D \leq 10:8,000$ 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	Initial Specified Value or less						
Standards 參照標準	IEC 60384-4 (JIS C 5101-4)							

Frequency Coefficient of Permissible Ripple Current

Capacitance (μ F)	Frequency (Hz)				
	50	120	1K	10K	100K
1~5.6	0.65	1.00	1.25	1.50	2.00
6.8 ~ 82	0.70	1.00	1.75	2.25	2.50
100 ~ 330	0.75	1.00	1.67	2.05	2.25

HE series

DIMENSIONS(mm)



ΦD	8	10	12.5	14.5	16	18
P	3.5	5.0	5.0	7.5	7.5	7.5
Φd	0.5	0.6	0.6	0.8	0.8	0.8

α	(L < 20) 1.5
	(L ≥ 20) 2.0

STANDARD RATINGS

DxL(mm), R.C.(mA rms) at 105°C 120 Hz.

Cap (μF)	V	160				200				250			
		Item	D x L	R.C.		D x L	R.C.		D x L	R.C.			
				120Hz	100KHZ		120Hz	100KHZ		120Hz	100KHZ		
10		10x16	125	313	10x16	125	313	10x20	140	350			
22		10x20	200	500	10x20	200	500	10x20	200	500			
33		10x20	250	625	10x20	260	650	12.5x20	320	800			
47		10x20	300	750	12.5x20	390	975	12.5x20	390	975			
68		12.5x20	470	1175	12.5x20	470	1175	16x22	520	1300			
82		12.5x20	510	1275	16x22	550	1375	16x22	550	1375			
100		12.5x25	620	1395	16x22	630	1420	16x25	680	1530			
		16x20	630	1418				16x25	680	1530			
150		16x20	770	1733	16x25	840	1890	18x25	860	1935			
220		18x25	1020	2295	18x25	1050	2365	18x31.5	1130	2545			
330		18x31.5	1390	3128	18x35.5	1430	3220						

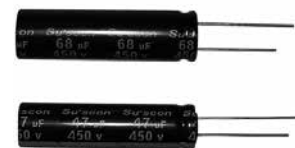
Cap (μF)	V	350				400				450			
		Item	D x L	R.C.		D x L	R.C.		D x L	R.C.			
				120Hz	100KHZ		120Hz	100KHZ		120Hz	100KHZ		
6.8		10x16	110	275	10x16	110	275	10x20	110	275			
10		10x20	140	350	10x20	140	350	12.5x20	180	450			
15					12.5x20	220	550	12.5x25	240	600			
22		12.5x20	260	650	12.5x20	260	650	16x22	290	725			
33		16x22	360	900	16x22	360	900	16x25	390	975			
	18x20							380	950				
47		16x22	430	1075	16x25	470	1175	18x25	480	1200			
	18x20				450	1125							
68		16x25	560	1400	18x25	585	1463	18x31.5	630	1575			
		18x20	550	1375									
82		18x25	610	1525	18x25	610	1525	18x35.5	715	1788			
100		18x25	700	1575	18x31.5	765	1721	18x40	800	1800			
120		18x31.5	830	1868	18x35.5	865	1946						
150		18x35.5	960	2160	18x40	985	2216						

HE

HE series

SLIM TYPE

- 105°C high-temperature and high voltage 350~450V, life 8000~10000hrs.
- Specially Size, 8~16mm diameter.
- For LCD-TV and LCD-Monitor Power.
- RoHS Compliance.
- 105°C 耐高溫標準品，高壓350~450V，壽命8000~10000小時。
- 特殊專用尺寸，直徑8~16mm。
- 使用於LCD TV與LCD Monitor電源應用。



STANDARD RATINGS

DxL(mm), R.C.(mA rms) at 105°C 120 Hz.

Cap (µF)	V	350			400			450			
		Item	D x L	R.C.		D x L	R.C.		D x L	R.C.	
				120Hz	100KHZ		120Hz	100KHZ		120Hz	100KHZ
22		10x30	212	530	8x50	236	590	8x50	254	635	
					10x35	260	650	10x40	280	700	
33		8x50	240	600	8x60	280	700	8x60	280	700	
		10x35	260	650	10x40	312	780	10x45	332	830	
39		10x40	280	700	12.5x30	336	840	12.5x40	360	900	
					10x50	380	950	10x50	420	1050	
47		10x50	380	950	12.5x35	400	1000	12.5x40	460	1150	
					14.5x30	400	1000	14.5x35	440	1100	
53		10x50	440	1100	10x60	480	1200	10x60	520	1300	
					12.5x40	480	1200	12.5x45	500	1250	
68		10x60	520	1300	14.5x30	400	1000	14.5x35	440	1100	
					12.5x40	480	1200	12.5x50	540	1350	
82		12.5x50	540	1350	14.5x45	600	1500	14.5x45	600	1500	
					16x40	628	1570	16x40	628	1570	
100		12.5x50	540	1350	12.5x60	600	1500	12.5x60	700	1750	
		14.5x40	588	1470	14.5x50	648	1620	14.5x50	720	1800	
100		12.5x60	660	1485	16x40	648	1620	16x45	792	1980	
		14.5x45	682	1534	14.5x50	770	1733	14.5x60	855	1924	
					16x50	902	2030	16x50	990	2228	

