

ALUMINUM ELECTROLYTIC CAPACITORS

HP series **105°C 2000HR**
105°C 2000 小時

- 105°C Standard for snap-in Terminals
105°C 自立型產品
- High Ripple Current
高紋波
- Used in Switch Power Supply, Smoothing Circuits.
Adapter, Inverter Lighting System
應用於開關電源、平流電路
適配器、變壓照明系統

SPECIFICATIONS

Item 項目	Performance Characteristics 特性																		
Operating Temperature Range 工作溫度範圍	-40°C ~ +105°C (10~100V) -25°C ~ +105°C (160~500V)																		
Rated Voltage Range 額定電壓範圍	10~500W.V																		
Capacitance Range 靜電容量範圍	47~56000uF																		
Capacitance Tolerance 靜電容量誤差	±20% (120Hz, +20°C)																		
Leakage Current 洩漏電流	$I \leq 3\sqrt{CV}$ After 5 minutes with rated working voltage applied at +20°C (印加額定工作電壓 5 分鐘) I=Leakage Current(μA) C:Nominal capacitance in μF V:Rated voltage in V I=洩漏電流(μA), C=額定容量(μF), V=額定電壓(V)																		
Dissipation Factor (tan δ) 散逸因素 (損失角正切值)	(120HZ/ +20°C)																		
	<table border="1"> <tr> <td>Rated voltage (V) 額定電壓(V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>Tan δ (MAX) 損失角正切值</td> <td>0.55</td> <td>0.50</td> <td>0.45</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> </tr> </table>	Rated voltage (V) 額定電壓(V)	10	16	25	35	50	63	80	100	Tan δ (MAX) 損失角正切值	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20
	Rated voltage (V) 額定電壓(V)	10	16	25	35	50	63	80	100										
	Tan δ (MAX) 損失角正切值	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20										
<table border="1"> <tr> <td>Rated voltage (V) 額定電壓(V)</td> <td>160-385</td> <td>400~500</td> </tr> <tr> <td>Tan δ (MAX) 損失角正切值</td> <td>0.15</td> <td>0.20</td> </tr> </table>	Rated voltage (V) 額定電壓(V)	160-385	400~500	Tan δ (MAX) 損失角正切值	0.15	0.20													
Rated voltage (V) 額定電壓(V)	160-385	400~500																	
Tan δ (MAX) 損失角正切值	0.15	0.20																	
For capacitance value > 33000uF, add following calculated value:(rated capacitance-33000uF)/10000uF x 0.1 容量 > 33000uF 時,增加以下計算值:(額定容量-33000uF)/10000uFx0.1																			

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Low Temperature Stability Impedance Ratio(MAX) 低溫特性阻抗比率	Rated Voltage (V) 額定電壓(V)	10~35	50	63~100	160~500
	Z(-25°C)/Z(+20°C)	6	4	3	8
	Z(-40°C)/Z(+20°C)	15	15	15	---
Load Life 負荷壽命	Application of rated voltage for 2000HRS at 105°C, the capacitor shall meet the characteristics requirement listed as following. 在 105°C 下印加額定電壓 2000 小時後, 電容特性需滿足以下要求。				
	Capacitance Change 容量變化	$\leq \pm 20\%$ of the initial measured value 不超出初始值的 $\pm 20\%$			
	tan δ 損失角正切值	$\leq 200\%$ of the initial specified value 不超出規格值的 2 倍			
	Leakage Current 洩漏電流	\leq The initial specified value 不超出規格值			
Shelf Life 放置壽命	After storage it for 1000HRS at 105°C with no voltage applied. The capacitor shall meet the following requirements. 電容放置在 105°C 無印加電壓的情況下儲存 1000 小時後, 電容需符合以下要求。				
	Capacitance Change 容量變化	$\leq \pm 15\%$ of the initial measured value 不超出初始值的 $\pm 15\%$			
	tan δ 損失角正切值	$\leq 150\%$ of the initial specified value 不超出規格值的 1.5 倍			
	Leakage Current 洩漏電流	\leq The initial specified value 不超出規格值			

Frequency coefficient

頻率系數

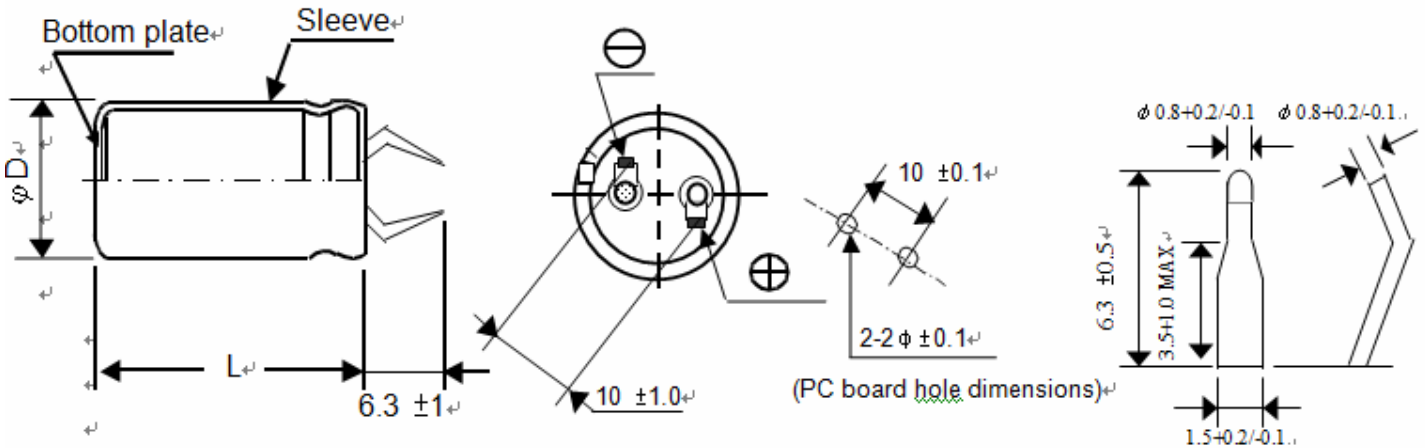
Freq(Hz) R.V(V)	60	120	1K	10~100K
10~100	0.90	1.00	1.15	1.25
160~250	0.80	1.00	1.25	1.47
315~500	0.80	1.00	1.30	1.47

ALUMINUM ELECTROLYTIC CAPACITORS

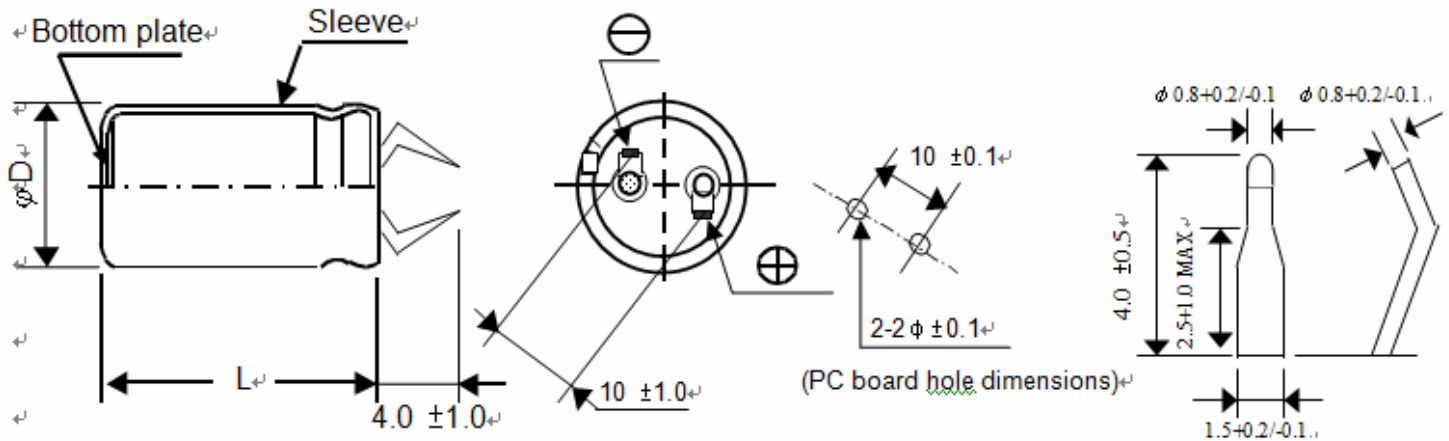
HP series

DIMENSIONS 尺寸(mm)

●TYPE. TB($22 \leq D \leq 35$)



●TYPE. TC($22 \leq D \leq 35$)



$\varphi D + 1.0 \text{ MAX}$
$L \pm 2.0$



ALUMINUM ELECTROLYTIC CAPACITORS

HP series

STANDARD SIZES AND RIPPLE CURRENT

尺寸及紋波標準

W.V		DxL(mm) Ripple Current (mA) 105°C, 120Hz) r.m.s																
Cap(uF)		10V		16V		25V		35V		50V		63V		80V		100V		
		1A		1C		1E		1V		1H		1J		1K		2A		
560	561																20x25	950
680	681																20x30	1150
																	22x25	1090
820	821													20x25	1040	20x35	1310	1400
																22x30	1470	1450
1000	103											20x25	1210	20x30	1240	20x35	1430	1470
														22x25	1190	22x30	1470	1450
																25x25	1610	1610
1200	122												20x30	1430	20x35	1430	20x40	1610
													22x25	1400	22x30	1500	22x35	1690
																25x30	1680	1680
1500	152									20x25	1290	20x35	1520	20x35	1570	22x40	1770	1770
												22X30	1500	22x30	1590	25x35	1780	1780
														25x25	1590	30x25	1750	1750
1800	182									20x30	1530	20x35	1720	20x40	1770	22x45	1930	1930
										22x25	1500	22x30	1700	22x35	1790	25x40	1900	1900
												25x25	1700	25x30	1710	30x30	1900	1900
2200	222									20x35	1720	20x40	1810	22x40	2030	25x45	2130	2130
										22x30	1700	22x30	1870	25x35	2100	30x35	2250	2250
												25x30	1900	30x25	1980	35x30	2300	2300
2700	272							20x25	1620	20x35	1820	22x40	2000	22x45	2190	25x50	2420	2420
										22x30	1800	25x35	2000	25x40	2250	30x40	2460	2460
										25x25	1800	30x25	2000	30x30	2250	35x35	2500	2500
3300	332							20x30	1940	20x40	2010	22x45	2200	25x45	2340	30x45	2600	2600
								22x25	1900	22x35	2000	25x35	2290	30x35	2310	35x35	2650	2650
										25x30	2000	30x30	2300	35x30	2400			
3900	392					20x25	1720	20x35	2020	22x40	2230	25x40	2370	25x50	2520	30x50	2900	2900
								22x30	2000	25x30	2200	30x35	2400	30x40	2520	35x40	2960	2960
								30x25	2200					35x30	2670			
4700	472					20x30	1840	20x40	2210	22x45	2400	25x50	2600	30x45	2940	35x45	3200	3200
						22x25	1900	22x35	2200	25x35	2430	30x40	2600	35x35	2980			
								25x25	2200	30x30	2500	35x30	2600					
5600	562			20x25	1890	20x35	2230	22x40	2400	22x50	2600	25x40	2720	30x50	2900	35x50	3350	3350
						22x30	2200	25x30	2400	25x40	2600	30x40	2800	35x35	2900			
								30x30	2400	30x30	2660	35x35	2800					
6800	682	20x25	1410	20x30	1950	20x40	2420	22x40	2600	25x45	2900	30x50	3160	35x45	3300			
				22x25	2000	22x30	2400	25x35	2600	30x35	3000	35x40	3140					
						25x25	2400	30x25	2680	35x30	3000							
8200	822	20x30	1670	20x35	2030	22x35	2500	22x50	2700	25x45	3210	30x45	3430	35x50	3600			
				22x30	2100	25x30	2500	25x40	2700	30x40	3250	35x35	3430					
						30x25	2500	30x30	2700	35x35	3250							
10000	103	20x30	1880	20x40	2190	22x40	2700	25x45	2820	30x45	3300	35x50	3550					
		22x25	1800	22x30	2100	25x35	2700	30x35	2820	35x40	3290							
				25x25	2100	30x30	2700											
12000	123	20x35	1930	22x35	2300	22x50	2800	25x50	3200									
		22x30	1900	25x30	2430	25x40	2800	30x40	3200	35x45	3460							
		25x25	1900	30x25	2430	30x30	2800	35x30	3200									
15000	153	20x40	2150	22x40	2500	25x45	2950	30x45	3320									
		22x35	2150	25x35	2500	30x35	2950	35x35	3320	35x50	3650							
		25x25	2150	30x30	2500	35x30	2950											



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Cap(uF)		W.V		10V		16V		25V		35V		50V		63V		80V		100V	
				1A		1C		1E		1V		1H		1J		1K		2A	
18000	183	22x40 25x30 30x25	2350 2300 2350	22x45 25x40 30x30	2650 2650 2650	30x40 35x35	3120 3120	35x40	3450										
22000	223	22x45 25x35 30x25	2480 2480 2480	25x45 30x35 35x30	2800 2800 2800	30x45 35x35	3350 3350	35x45	3620										
27000	273	22x50 25x40 30x30	2720 2700 2700	25x50 30x40 35x30	3000 3000 3000	35x45	3520												
33000	333	25x45 30x35 35x30	2850 2850 2850	30x45 35x35	3260 3260	35x50	3750												
39000	393	30x40 35x30	3000 3000	30x50 35x40	3450 3450														
47000	473	30x45 35x35	3220 3220	35x45	3600														
56000	563	35x40	3460																

HP series

Cap(uF)		W.V		160V		200V		220V		250V		400V		420V		450V		500V	
				2C		2D		2B		2E		2G		2H		2W		2Z	
47	470															20x25	390	22x25	350
56	560											20x25	510	20x25	510	20x30 22x25	510 500	22x25	380
68	680											20x30 22x25	560 550	20x30 22x25	560 550	20x35 22x25 25x25	560 500 530	22x30	450
82	820											20x30 22x25 30x20	640 640 450	22x25 20x35	640 640	22x25 22x30 25x25 20x35	590 640 640 640	22x35	540
100	101											20x35 22x30 25x25	700 700 700	22x30 20x35 25x25	700 700 700	22x30 25x25 30x25	650 640 720	22x35 30x25	560 620
120	121											20x40 22x35	750 700	22x30 25x30 30x25	700 750 780	22x35 22x40 25x30 30x25	760 800 800 800	22x40	640
150	151									20x25	790	22x25 22x40 25x30 30x25	780 880 830 880	22x25 22x40 25x35 30x25	700 880 880 880	22x35 22x40 25x30 25x35 30x30	800 840 840 880 880	22x40 25x40	750 760
180	181							20x25	900	20x30 22x25	900 880	22x40 25x25 25x35 30x30	930 930 980 980	22x40 25x35 30x30 35x25	900 920 960 940	22x35 25x35 25x30 25x40 30x30	880 950 1000 1000 1000	22x45 30x35	820 860
220	221			20x25	1000	20x30 22x25	1000 1000	20x35 22x25	1000 1000	22x45 25x35 30x30	1050 1040 1100	22x35 22x45 30x30 35x25	980 1050 1030 1100	25x30 25x45 30x35 35x30	1050 1120 1120 1120	25x30 25x45 30x35 35x30	1050 1120 1120 1120	22x50 30x40	900 970



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HP series

DxL(mm) Ripple Current (mA) 105°C, 120Hz) r.m.s

W.V		160V		200V		220V		250V		400V		420V		450V		500V	
Cap(uF)		2C		2D		2B		2E		2G		2H		2W		2Z	
270	271	20x25	1100	20x30 22x25	1100 1100	20x35 22x30	1150 1150	20x40 22x30 25x30	1100 1180 1270	25x30 25x40 25x50 30x35 35x30	1100 1130 1290 1220 1220	22x45 25x30 25x40 25x50 30x35 35x30	1120 1080 1240 1370 1180 1220	22x45 25x40 30x35 30x40 35x35	1120 1150 1200 1200 1280	30x45	1120
330	331	20x30 22x25	1200 1200	22x30 20x35 25x25	1250 1200 1250	20x40 22x35 25x25	1250 1250 1250	22x35 25x30 30x25	1300 1300 1350	25x40 30x35 30x45 35x25 35x30	1320 1420 1550 1400 1440	25x40 30x45 35x25 35x30	1200 1490 1400 1360	25x45 30x30 30x45 30x50 35x40	1350 1250 1390 1450 1450	35x45	1350
390	391	20x35 22x30	1420 1300	22x30 20x40 25x25	1350 1310 1350	20x45 22x35 25x30	1400 1400 1400	22x40 25x30 25x35 30x25	1490 1350 1490 1490	25x45 30x45 35x35	1500 1600 1600	25x48 30x40 30x45 35x40	1380 1400 1600 1630	25x45 30x40 25x50 35x40	1420 1420 1480 1550	35x40	1450
470	471	20x40 22x30 25x25	1340 1550 1550	22x35 25x30 30x25	1500 1500 1500	22x40 25x30 30x25	1510 1440 1500	22x45 25x40 30x30	1650 1650 1650	25x45 30x45 35x40	1650 1700 1900	25x45 30x45 35x40	1460 1740 1810	30x40 35x40 35x45 35x50	1580 1670 1750 1850	30x50 35x50	1500 1550
560	561	22x35 25x30	1670 1670	22x40 25x30 30x25	1670 1590 1670	22x45 25x35 30x30 35x25	1700 1640 1700 1710	25x45 30x35	1800 1800	25x50 30x40 30x45 35x45	1700 1900 1940 2120	30x45 35x50	1950 2200	25x60 30x45 35x35	2000 1750 1850	30x60	1760
680	681	22x40 25x35 30x25	1820 1850 1820	25x28 22x45 25x35 30x25 30x30	1630 1780 1720 1660 1780	22x45 25x40 30x30 30x35 35x30	1800 1840 1810 1930 1890	22x45 25x40 25x50 30x35 35x30	1800 1900 2030 2000 2000	30x45	2140	25x50 30x45 35x40	2050 2050 2250	30x50 35x40	2200 2250		
820	821	22x45 25x35 30x30	2040 2040 2040	25x40 30x35 35x25 35x40	1990 2040 2040 2160	30x40 25x45 35x30	2190 2080 2160	30x40 35x35	2300 2300	30x50 35x45	2400 2400	35x45 35x50	2445 2480	30x60 35x65	2500 2650		
1000	102	22x50 25x45 30x35	2150 2400 2250	25x50 30x35 35x30 35x40	2420 2300 2300 2360	30x35 30x45 35x35	2320 2500 2440	25x50 30x50 35x40	2500 2700 2690	35x50	2800	35x50	2800				
1200	122	25x50 30x35 35x30	2620 2490 2490	25x50 30x40 35x35 35x40	2450 2650 2650 2670	35x40	2790	35x45	3090			35x60	2920				
1500	152	30x40 35x35	2650 2650	30x50 35x40	3100 3080	35x45	3220										
1800	182	30x50 35x35	2900 2850	30x50 35x45	3200 3480												
2200	222	35x45	3000														