

HP 耐高温焊针型

SNAP-IN TERMINAL TYPE, WIDE TEMPERATURE RANGE SERIES

低中高壓，焊針式耐高溫 105℃，
可用於大螢幕彩電、變頻空調、音響等電子線路中。

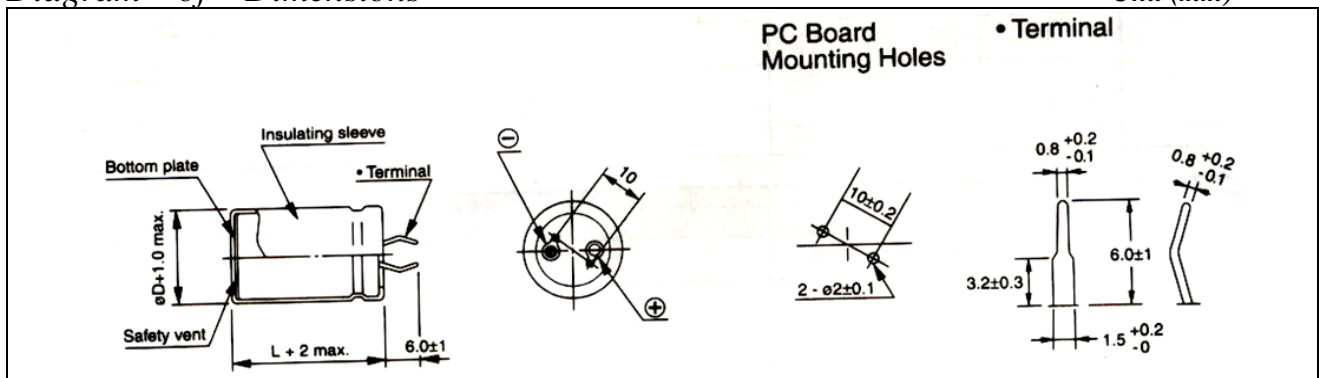
Low, medium and high voltage, wide temperature range 105℃, Use in big screen color-TV,
frequency conversion air conditioner audio circuits, etc.

Specifications

No	Item	Performance																									
1	使用溫度範圍 Operating Temperature Range	-40℃ to +105℃	-25℃ to +105℃																								
2	定格電壓範圍 Rated Working Voltage Range	10~100V.DC	160~450V.DC																								
3	靜電容量範圍 Capacitance Tolerance	330 – 68000µF	33-2200µF																								
4	靜電容量容許差 Capacitance Tolerance	±20% (at +20 ⁰ C, 120Hz)																									
5	洩漏電流 Leakage Current	I ≤ 0.03CV (µA) + 3mA (whichever is greater) after five minutes																									
6	損失角 Dissipation Factor (tan δ) (120Hz / +20℃)	<table border="1"> <thead> <tr> <th>Working Voltage (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ max.</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> <td>0.15</td> <td>0.25</td> </tr> </tbody> </table>				Working Voltage (V)	10	16	25	35	50	63	80	100	160~400	450	tan δ max.	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.25
Working Voltage (V)	10	16	25	35	50	63	80	100	160~400	450																	
tan δ max.	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.25																	
7	低溫度特性 (at 120 Hz) Characteristics at low temperature (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Working Voltage (V)</th> <th>10~250</th> <th>350~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25℃/+20℃</td> <td>3</td> <td>4</td> <td>12</td> </tr> <tr> <td>Z-40℃/+20℃</td> <td>12</td> <td>-</td> <td>-</td> </tr> </tbody> </table>				Working Voltage (V)	10~250	350~400	450	Z-25℃/+20℃	3	4	12	Z-40℃/+20℃	12	-	-										
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8	高溫負荷特性 High Temperature Loading	After 2000hrs. application of DC rated working voltage at +105℃. The capacitor shall meet the following limits: Post test requirements at + 20℃ <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ the Initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor (tan δ)</td> <td>≤ 200% of initial specified value</td> </tr> </tbody> </table>				Leakage current	≤ the Initial specified value	Capacitance change	≤ ±20% of initial measured value	Dissipation Factor (tan δ)	≤ 200% of initial specified value																
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9	高溫無負荷特性 Shelf Life	After 1000hrs. Application of DC no rated working voltage at +105℃, The capacitor shall meet the following limits: Post test requirements at + 20℃ <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ 200% of initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor (tan δ)</td> <td>≤ 200% of initial specified value</td> </tr> </tbody> </table>				Leakage current	≤ 200% of initial specified value	Capacitance change	≤ ±20% of initial measured value	Dissipation Factor (tan δ)	≤ 200% of initial specified value																
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Diagram of Dimensions

Unit (mm)



Multiplier for ripple current 紋波電流補正係數

Frequency Coefficient 周波數係數

數

Frequency (Hz)	50 (60)	120	400	1K	10K	50K~100K
10 < CAP ≤ 100	0.8	1	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.8	1	1.16	1.25	1.35	1.38
1000 < CAP	0.8	1	1.11	1.17	1.25	1.28

Temperature Coefficient 周圍溫度係數

temperature (°C)	105	85	≤65
Coefficient	1.0	1.7	2.1

HP series

DIMENSIONS & MAXIMUM PMISSIBLE RIPPLE CURRENT 规格尺寸及最大允许纹波电流

W.V. (SV) ØD µF	10 (13)								16 (20)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
3300										22×26	1.17						
4700	22×26	1.24								22×31	1.53	25×26	1.53				
6800	22×26	1.56	25×26	1.56						22×31	2.02	25×26	2.02	30×26	2.02		
8200	22×26	2.04	25×26	2.04						22×31	2.20						
10000	22×31	2.20	25×26	2.20	30×26	2.20				22×36	2.79	25×31	2.79	30×26	2.79		
12000	22×36	2.34	25×26	2.34						22×36	3.06	25×31	3.06	30×26	3.06		
15000	22×36	2.76	25×31	2.76	30×26	2.76				22×51	3.24	25×41	3.24	30×36	3.24	35×32	3.24
18000	22×36	2.96	25×31	2.96						22×51	3.51	25×46	3.51	30×36	3.51	35×32	3.51
22000	22×41	3.12	25×36	3.12	30×31	3.12	35×27	3.12			25×51	4.08	30×41	4.08	35×32	4.08	
27000	22×46	3.48	25×36	3.48	30×31	3.48	35×27	3.48			25×51	4.30	30×46	4.30	35×37	4.30	
33000			25×46	3.72	30×36	3.72	35×32	3.72					30×46	4.83	35×37	4.83	
39000			25×51	4.10	30×41	4.10	35×32	4.10					30×51	5.78	35×42	5.78	
47000					30×46	4.38	35×37	4.38							35×47	6.32	
56000					30×51	4.64	35×42	4.64							35×52	7.05	
68000							35×52	4.80									

W.V. (SV) ØD µF	25 (32)								35 (44)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
1500										22×26	1.26						
2200	22×26	1.03								22×31	1.35	25×26	1.35				
3300	22×26	1.48	25×26	1.48						22×31	1.84	25×26	1.84	30×26	1.84		
3900										22×31	2.23						
4700	22×31	1.92	25×26	1.92	30×26	1.92				22×36	2.42	25×31	2.42	30×26	2.42		
5600	22×31	2.25								22×41	2.89	25×31	2.89	30×26	2.89		
6800	22×31	2.60	25×26	2.60	30×26	2.60				22×51	3.24	25×36	3.24	30×31	3.24	35×27	3.24
8200	22×36	3.14	25×31	3.14	30×26	3.14					25×41	3.57	30×31	3.57	35×27	3.57	
10000	22×41	3.50	25×36	3.50	30×31	3.50	35×27	3.50			25×46	3.96	30×36	3.96	35×32	3.96	
12000	22×46	4.02	25×41	4.02	30×31	4.02	35×27	4.02			25×51	4.21	30×41	4.21	35×32	4.21	
15000			25×46	4.58	30×36	4.58	35×32	4.58					30×46	4.69	35×37	4.69	
18000			25×51	4.82	30×41	4.82	35×37	4.82							35×42	5.07	
22000					30×46	5.12	35×37	5.12							35×52	5.50	
27000							35×47	5.47									
33000							35×52	6.09									

W.V. (SV) ØD µF	50 (63)								63 (79)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
680										22×26	0.70						
1000	22×26	0.84								22×26	0.85	25×26	0.85				
1200										22×26	0.98						
1500	22×31	1.10	25×26	1.10						22×31	1.10	25×26	1.10	30×26	1.10		
1800	22×31	1.54								22×31	1.40	25×26	1.40				
2200	22×31	1.65	25×26	1.65	30×26	1.65				22×36	1.65	25×31	1.65	30×26	1.65		
2700	22×36	1.94	25×31	1.94		1.94				22×41	2.07	25×36	2.07	30×26	2.07		
3300	22×36	2.24	25×31	2.24	30×26	2.24				22×51	2.48	25×41	2.48	30×31	2.48	35×27	2.48
3900	22×41	2.54	25×36	2.54	30×31	2.54					25×46	3.05	30×36	3.05	35×32	3.05	
4700	22×46	2.95	25×41	2.95	30×31	2.95	35×27	2.95			25×51	3.43	30×41	3.43	35×32	3.43	
5600	22×51	3.10	25×46	3.10	30×41	3.10	35×32	3.10					30×46	3.86	35×37	3.86	
6800			25×51	3.26	30×41	3.26	35×32	3.26					30×51	4.64	35×42	4.64	
8200					30×46	2.58	35×37	2.58							35×47	5.05	
10000					30×51	4.11	35×42	4.11							35×52	5.75	
12000							35×47	4.62									
15000							35×52	5.05									

Case size ØD×L (mm); R. C. =Ripple current (A rms) at 105°C, 120Hz

HP series

DIMENSIONS & MAXIMUM PMISSIBLE RIPPLE CURRENT 规格尺寸及最大允许纹波电流

W.V. (SV) µF ØD	80 (100)								100 (125)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
330										22×26	0.54						
470	22×26	0.63								22×31	0.79	25×26	0.79				
560	22×31	0.70								22×31	0.90	25×26	0.90				
680	22×31	0.84	25×26	0.84						22×31	1.02	25×26	1.02	30×26	1.02		
820	22×31	1.02	25×31	1.02						22×31	1.26	25×26	1.26	30×26	1.26		
1000	22×36	1.16	25×31	1.16	30×26	1.16				22×36	1.38	25×31	1.38	30×26	1.38		
1200	22×36	1.46	25×31	1.46	30×31	1.46				22×41	1.65	25×36	1.65	30×31	1.65		
1500	22×41	1.74	25×36	1.74	30×31	1.74				22×46	1.83	25×41	1.83	30×31	1.83	35×27	1.83
1800	22×46	1.95	25×41	1.95	30×31	1.95	35×27	1.95			25×41	2.52	30×36	2.52	35×32	2.52	
2200	22×51	2.25	25×46	2.25	30×36	2.25	35×32	2.25			25×51	3.03	30×41	3.03	35×32	3.03	
2700			25×51	2.68	30×41	2.68	35×37	2.68					30×46	4.10	35×37	4.10	
3300			25×56	3.30	30×51	3.30	35×42	3.30					30×56	4.59	35×47	4.59	
3900					30×51	3.85	35×42	3.85							35×47	4.98	
4700					30×51	4.29	35×42	4.29							35×52	5.43	
5600							35×47	5.10									
6800							35×52	5.66									

W.V. (SV) µF ØD	160 (200)								200 (250)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
100										22×26	0.38						
150	22×26	0.37								22×26	0.54	25×26	0.54				
220	22×26	0.42								22×31	0.92	25×26	0.92	30×26			
270	22×26	0.74								22×31	1.03	25×26	1.03	30×26	1.03		
330	22×31	0.98	25×26	0.98	30×26	0.98				22×36	1.21	25×31	1.21	30×26	1.21		
390	22×36	1.10	25×31	1.10	30×26	1.10				22×41	1.39	25×36	1.39	30×31	1.39		
470	22×36	1.21	25×31	1.21	30×26	1.21				22×46	1.62	25×41	1.62	30×31	1.62	35×27	1.62
560	22×41	1.40	25×36	1.40	30×31	1.40	35×27	1.40		22×51	1.85	25×41	1.85	30×36	1.85	35×27	1.85
680	22×46	1.64	25×41	1.64	30×36	1.64	35×32	1.64		22×56	2.04	25×51	2.04	30×36	2.04	35×32	2.04
820			25×46	1.85	30×36	1.85	35×32	1.85			25×56	2.34	30×41	2.34	35×37	2.34	
1000			25×51	2.15	30×41	2.15	35×32	2.15					30×46	2.70	35×42	2.70	
1200			25×56	2.46	30×46	2.46	35×37	2.46					30×51	3.00	35×42	3.00	
1500					30×51	2.80	35×42	2.80							35×52	3.43	
1800					30×51	3.13	35×42	3.13							35×52	4.01	
2200							35×56	3.39									

W.V. (SV) µF ØD	220 (270)								250 (300)								
	22		25		30		35		22		25		30		35		
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	
68										22×26	0.27						
100										22×31	0.44	25×26	0.44				
150	22×26	0.50	25×26	0.50						22×31	0.60	25×26	0.60	30×26	0.60		
180	22×26	0.60	25×26	0.60						22×31	0.69	25×26	0.69	30×26	0.69		
220	22×31	0.85	25×26	0.85	30×26	0.85				22×36	1.00	25×31	1.00	30×26	1.00		
270	22×31	1.05	25×26	1.05	30×26	1.05				22×41	1.16	25×36	1.16	30×31	1.16		
330	22×36	1.15	25×31	1.15	30×26	1.15				22×46	1.28	25×36	1.28	30×31	1.28	35×27	1.28
390	22×41	1.25	25×36	1.25	30×31	1.25				22×46	1.48	25×36	1.48	30×31	1.48	35×27	1.48
470	22×46	1.35	25×41	1.35	30×31	1.35	35×27	1.35			25×46	1.76	30×36	1.76	35×32	1.76	
560	22×51	1.60	25×46	1.60	30×36	1.60	35×27	1.60			25×51	1.93	30×41	1.93	35×32	1.93	
680	22×56	1.75	25×51	1.75	30×41	1.75	35×27	1.75					30×46	2.22	35×37	2.22	
820			25×56	2.00	30×46	2.00	35×37	2.00					30×51	2.48	35×42	2.48	
1000					30×51	2.40	35×42	2.30							35×47	2.80	
1200							35×47	2.30							35×52	3.17	
1500							35×52	2.40									
1800							35×56	2.50									

Case size ØD×L (mm); R. C. =Ripple current (A rms) at105°C, 120Hz

HP series

DIMENSIONS & MAXIMUM PMISSIBLE RIPPLE CURRENT 规格尺寸及最大允许纹波电流

W.V. (SV) µF ØD	400 (450)								450 (500)							
	22		25		30		35		22		25		30		35	
	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.	SIZE	R.C.
33	22×26	0.39								22×26	0.24					
47	22×26	0.56	25×26	0.56					22×31	0.35	25×26	0.35				
56	22×31	0.68	25×26	0.68					22×31	0.41	25×26	0.41				
68	22×31	0.72	25×26	0.72	30×26	0.72			22×36	0.55	25×31	0.55	30×26	0.55		
82	22×36	0.82	25×31	0.82	30×26	0.82			22×36	0.64	25×31	0.64	30×26	0.64		
100	22×36	0.82	25×31	0.82	30×26	0.82			22×41	0.74	25×31	0.74	30×31	0.74		
120	22×36	0.90	25×31	0.90	30×26	0.90			22×46	0.82	25×36	0.82	30×31	0.82		
150	22×41	0.98	25×36	0.98	30×31	0.98	35×27	0.98	22×51	0.96	25×41	0.96	30×36	0.96	35×27	0.96
180	22×46	1.14	25×41	1.14	30×36	1.14	35×32	1.14			25×46	1.14	30×41	1.14	35×32	1.14
220			25×46	1.21	30×41	1.21	35×32	1.21					30×46	1.24	35×37	1.24
270					30×46	1.40	35×37	1.40					30×51	1.48	35×42	1.48
330					30×51	1.57	35×42	1.57							35×47	1.64
390							35×47	1.74							35×52	1.86
470							35×52	1.98							35×52	1.86
560							35×52	2.23							35×52	2.11

Case size ØD×L (mm); R. C. =Ripple current (A rms) at105°C, 120Hz