

**KP Series**

**Features**

- Snap-in, high reliability, non solvent resistant type
- Endurance with ripple current: 105°C 7000 hours
- High ripple current capability
- Safety vent designed on aluminum case
- RoHS2.0 Compliant

**Applications**

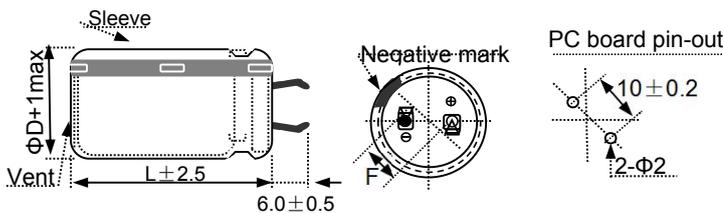
- Professional power supply
- Inverter
- UPS
- Air conditioner, general purpose inverter
- Professional arena power amplifier
- Frequency converters
- Medical power supply
- And others

**规格表 Specifications**

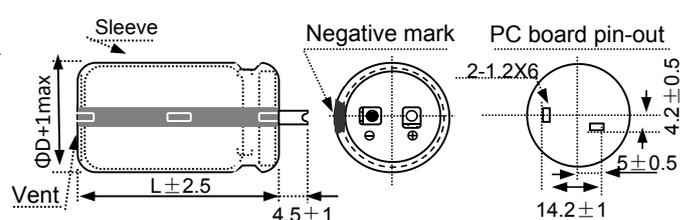
项目 Items	特性参数 Characteristics		
使用温度范围 Category Temperature Range	-25 ~ +105°C		
额定工作电压范围 Rated Voltage Range	160 ~ 450V.DC		
电容量允许偏差 Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
漏电流 Leakage Current	$I \leq 3\sqrt{CV}$ 施加额定工作电压5分钟 After 5 minutes application of rated voltage. Note: I = Max. leakage current (µA), C = Nominal capacitance (µF), V = Rated voltage (V) (at 20°C)		
损耗角正切值 tanδ Dissipation Factor	Rated voltage(V)	160 ~ 350	400 ~ 450
	tanδ (Max.)	0.15	0.20
	标称容量超过1000µF, 则每增加1000µF, 损耗角正切值增加0.02 When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase. (at 20°C, 120Hz)		
低温特性 Low Temperature Characteristics (Max. Impedance Ratio)	阻抗比值不得超过下表中列出的值 The impedance ratio shall not exceed the values listed in the below table.		
	Rated volage(V)	160 ~ 350	400 ~ 450
	Z(-25°C)/Z(+20°C)	4	8
	(at 120Hz)		
耐久性 Endurance	在105°C环境中, 不超过额定电压的范围内叠加最大允许纹波电流, 连续7000小时, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored to 20°C after applied within maximum allowable ripple current and not over rated voltage range for 7000 hours at 105°C.		
	Capacitance change	≅ ±20% of the initial value	
	D.F.(tanδ)	≅ 250% of the initial specified value	
	Leakage current	≅ The initial specified value	
高温储存特性 Shelf Life	在105°C环境中, 不施加电压条件下储存1000小时, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored at 20°C after exposing them for 1000 hours at 105°C without voltage applied.		
	Capacitance change	≅ ±15% of the initial value	
	D.F.(tanδ)	≅ 150% of the initial specified value	
	Leakage current	≅ 200% of the initial specified value	

**尺寸图 (单位: mm) DIMENSIONS (Unit:mm)**

● Standard Terminal Type : S (Φ22 ~ Φ35)



● Terminal Type : P (Φ35)



**纹波电流修正系数 Rated Ripple Current Coefficient**

● 频率系数 Frequency Coefficient

Frequency (Hz)	50	120	300	1k	10k	50k
160 ~ 250V	0.81	1.00	1.17	1.32	1.45	1.50
315 ~ 450V	0.77	1.00	1.16	1.30	1.41	1.43

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◆ 标准品一览表 Standard Ratings

WV(V) Cap.(μF)	160(2C)				180(2Z)				200(2D)			
220									22×25 0.91			
270					22×25 1.01				22×30 1.06			
330	22×25 1.09				22×30 1.15				22×30 1.15	25×25 1.15		
390	22×30 1.25				22×30 1.25	25×25 1.25			22×35 1.28	25×30 1.28		
470	22×30 1.38	25×25 1.37			22×35 1.43	25×30 1.43			22×40 1.47	25×30 1.43	30×25 1.46	
560	22×35 1.56	25×30 1.56			22×40 1.59	25×30 1.55	30×25 1.58		22×45 1.64	25×35 1.63	30×30 1.63	
680	22×40 1.74	25×35 1.77	30×25 1.73		22×45 1.78	25×35 1.77	30×30 1.78			25×40 1.82	30×30 1.78	
820	22×50 1.98	25×40 2.02	30×30 1.97			25×40 2.02	30×35 2.05			25×45 2.07	30×35 2.05	
1000		25×45 2.26	30×35 2.25			25×50 2.31	30×35 2.25	35×30 2.29			30×45 2.41	35×30 2.29
1,200		25×50 2.55	30×40 2.57	35×30 2.53			30×45 2.66	35×35 2.59			30×50 2.82	35×40 2.71
1,500			30×45 2.95	35×35 2.88			30×50 3.02	35×40 3.00				35×45 3.11
1800			30×50 3.31	35×40 3.29				35×45 3.42				35×50 3.51
2200				35×50 3.88				35×50 3.88				

WV(V) Cap.(μF)	220(2P)				250(2E)				315(2F)			
100									22×25 0.66			
120									22×30 0.76			
150									22×30 0.85	25×25 0.84		
180					22×25 0.81				22×35 0.95	25×30 0.95		
220	22×25 0.89				22×30 0.94				22×40 1.08	25×30 1.05	30×25 1.07	
270	22×30 1.06				22×35 1.07	25×25 1.04			22×45 1.25	25×35 1.24	30×30 1.24	
330	22×35 1.18	25×25 1.15			22×40 1.23	25×30 1.20				25×40 1.41	30×35 1.43	35×30 1.46
390	22×40 1.32	25×30 1.28			22×45 1.37	25×35 1.36	30×25 1.31			25×50 1.58	30×35 1.53	35×30 1.56
470	22×45 1.50	25×35 1.49	30×25 1.46		22×50 1.48	25×40 1.51	30×30 1.48				30×45 1.82	35×35 1.78
560	22×50 1.62	25×40 1.71	30×30 1.61		22×60 1.90	25×45 1.71	30×35 1.70				30×50 2.02	35×40 2.01
680		25×45 1.88	30×35 1.87			25×50 1.90	30×40 1.92	35×30 1.89				35×45 2.28
820		25×50 2.09	30×40 2.11	35×30 2.07			30×45 2.18	35×35 2.12				35×50 2.59
1000			30×50 2.49	35×40 2.47				35×40 2.47				
1,200				35×45 2.79				35×50 2.85				
1,500				35×50 3.21	← Case size: ΦD×L(mm)				← Maximum allowable ripple current at 105°C/120Hz(A.r.m.s)			

※铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，中心温度每升温5°C寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流。

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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Cap.(μF)	WV(V)	350(2V)				400(2G)			
		68					22×25 0.54		
82					22×30 0.62				
100	22×25 0.67				22×30 0.71	25 ×25 0.71			
120	22×30 0.76	25 ×25 0.75			22×35 0.78	25 ×30 0.78			
150	22×35 0.87	25 ×30 0.87			22×40 0.89	25 ×30 0.87	30×25 0.89		
180	22×40 0.99	25 ×30 0.96	30×25 0.98		22×45 1.00	25 ×35 1.02	30×30 1.02		
220	22×45 1.13	25 ×35 1.12	30×30 1.12			25 ×40 1.13	30×35 1.15		
270		25×40 1.25	30×35 1.27			25 ×50 1.31	30×40 1.32	35×30 1.30	
330		25×45 1.39	30×35 1.41	35×30 1.43			30×45 1.53	35×35 1.49	
390			30×40 1.59	35×35 1.60			30×50 1.68	35×40 1.67	
470			30×50 1.87	35×40 1.86				35×45 1.92	
560				35×40 2.01				35×50 2.15	
680				35×50 2.35					

Cap.(μF)	WV(V)	420(W6)				450(2W)			
		47					22×25 0.46		
56	22×25 0.51				22×30 0.51				
68	22×30 0.57				22×30 0.57	25 ×25 0.57			
82	22×30 0.62	25×25 0.62			22×35 0.66	25 ×30 0.66			
100	22×35 0.73	25×30 0.73			22×40 0.73	25×30 0.71	30×25 0.72		
120	22×40 0.80	25×30 0.78	30×35 0.79		22×45 0.82	25 ×35 0.81	30×30 0.81		
150	22×45 0.91	25 ×35 0.91	30×30 0.91			25 ×40 0.93	30×35 0.95		
180		25 ×40 1.02	30×35 1.04			25×45 1.05	30×35 1.04	35×30 1.06	
220		25×50 1.20	30×35 1.17	35×30 1.19			30×40 1.19	35×35 1.20	
270			30×45 1.37	35×35 1.35			30×50 1.42	35×40 1.41	
330	30×50 1.55	35×40 1.54						35×45 1.61	
390	35×45 1.73							35×50 1.78	
470	35×50 1.96	← Case size: ΦD×L(mm) ← Maximum allowable ripple current at 105°C/120Hz(A.r.m.s)							

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