

**KN Series**

**Features**

- Snap-in, high reliability
- Endurance with ripple current: 105°C 5000 hours
- High ripple current capability
- Safety vent designed on aluminum case
- RoHS2.0 Compliant

**Applications**

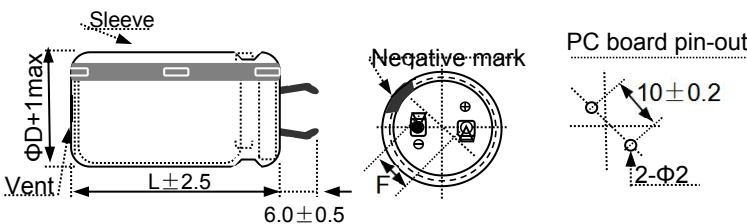
- Professional power supply
- Inverter
- UPS
- Air conditioner, general purpose inverter
- Professional arena power amplifier
- Frequency converters
- Medical power supply
- And others

**规格表 Specifications**

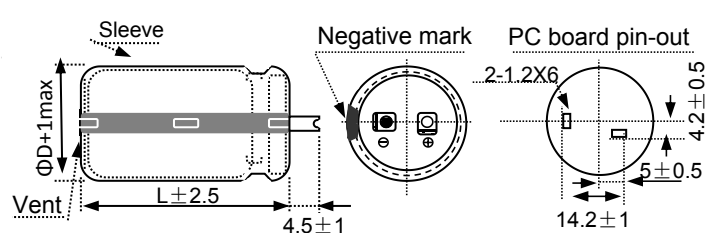
项目 Items	特性参数 Characteristics			
使用温度范围 Category Temperature Range	-25 ~ +105°C			
额定工作电压范围 Rated Voltage Range	160 ~ 500V.DC			
电容量允许偏差 Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)			
漏电流 Leakage Current	$I \leq 3\sqrt{CV}$ 施加额定工作电压5分钟 After 5 minutes application of rated voltage. Note: I= Max. leakage 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 ~ 400	420 ~ 450	500
	tanδ (Max.)	0.15	0.20	0.24
	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所列出的值 The impedance ratio shall not exceed the values listed in the below table.			
	Rated voltage(V)	160 ~ 400	420 ~ 450	500
	Z(-25°C)/Z(+20°C)	4	8	10
	(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5000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 5000 hours at 105°C.			
	Capacitance change	≅ ±20% of the initial value		
	D.F.(tanδ)	≅ 200% 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	≅ ±20% 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 ~ 500V	0.77	1.00	1.16	1.30	1.41	1.43



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◆ 标准品一览表 Standard Ratings

Cap.(μF)	160(2C)				180(2Z)			
	WV(V)				WV(V)			
270					22×25 1.00			
330	22×25 1.11				22×30 1.16			
390	22×30 1.26				22×30 1.26	25×25 1.26		
470	22×30 1.39	25×25 1.38			22×35 1.42	25×30 1.42		
560	22×35 1.55	25×30 1.55			22×40 1.59	25×30 1.55	30×25 1.58	
680	22×40 1.75	25×35 1.78	30×25 1.74		22×45 1.79	25×35 1.78	30×30 1.79	
820	22×50 1.97	25×40 2.01	30×30 1.96			25×40 2.01	30×35 2.04	
1,000		25×45 2.27	30×35 2.26			25×50 2.32	30×35 2.26	35×30 2.30
1,200		25×50 2.54	30×40 2.56	35×30 2.52			30×45 2.65	35×35 2.58
1,500			30×45 2.96	35×35 2.89			30×50 3.03	35×40 3.01
1,800			30×50 3.32	35×40 3.30				35×45 3.41
2,200				35×50 3.87				35×50 3.87

Cap.(μF)	200(2D)				220(2P)			
	WV(V)				WV(V)			
220	22×25 0.90				22×25 0.90			
270	22×30 1.05				22×30 1.05			
330	22×30 1.16	25×25 1.16	25X30 1.28		22×35 1.19	25×25 1.16		
390	22×35 1.29	25×30 1.29			22×40 1.33	25×30 1.29		
470	22×40 1.46	25×30 1.42	30×25 1.45		22×45 1.49	25×35 1.48	30×25 1.45	
550	22×45 1.63	25×35 1.62	30×30 1.62		22×50 1.63	25×40 1.71	30×30 1.62	
680		25×40 1.83	30×30 1.79			25×45 1.87	30×35 1.86	
820		25×45 2.06	30×35 2.04			25×50 2.10	30×40 2.12	35×30 2.08
1,000			30×45 2.42	35×30 2.30			30×50 2.48	35×40 2.46
1,200			30×50 2.71	35×40 2.70				35×45 2.78
1,500				35×45 3.11				35×50 3.20
1,800				35×50 3.50	← 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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WV(V) Cap.(μF)	250(2E)				315(2F)			
100					22×25 0.67			
120					22×30 0.77			
150					22×30 0.86	25×25 0.85		
180	22×25 0.82				22×35 0.96	25×30 0.96		
220	22×30 0.95				22×40 1.09	25×30 1.06	30×25 1.08	
270	22×35 1.08	25×25 1.05			22×45 1.24	25×35 1.23	30×30 1.23	
330	22×40 1.22	25×30 1.19				25×40 1.40	30×35 1.42	35×30 1.45
390	22×45 1.36	25×35 1.35	30×25 1.32			25×50 1.59	30×35 1.54	35×30 1.57
470	22×50 1.49	25×40 1.52	30×30 1.49				30×45 1.81	35×35 1.77
560		25×45 1.70	30×35 1.69				30×50 2.03	35×40 2.02
680		25×50 1.91	30×40 1.93	35×30 1.90				35×45 2.29
820			30×45 2.19	35×35 2.13				35×50 2.59
1,000				35×40 2.46				
1,200				35×50 2.86				

WV(V) Cap.(μF)	350(2V)				400(2G)			
68					22×25 0.55			
82					22×30 0.63			
100	22×25 0.67				22×30 0.70	25×25 0.70	25×30 0.76	
120	22×30 0.77	25×25 0.76			22×35 0.79	25×30 0.79		
150	22×35 0.88	25×30 0.88			22×40 0.90	25×30 0.88	30×25 0.90	
180	22×45 0.99	25×30 0.96	30×25 0.98		22×45 0.99	25×35 1.01	30×30 1.01	
220	22×45 1.12	25×35 1.11	30×30 1.11			25×40 1.14	30×35 1.16	
270	25×40 1.26	30×35 1.28				25×50 1.32	30×40 1.33	35×30 1.31
330	25×45 1.40	30×35 1.42	35×30 1.45				30×45 1.52	35×35 1.48
390	30×40 1.60	35×35 1.61					30×50 1.69	35×40 1.68
470	30×50 1.86	35×40 1.85						35×45 1.91
560	35×40 2.02							35×50 2.14
680	35×50 2.36	← Case size: ΦD×L(mm) ← Maximum allowable ripple current at 105°C/120Hz(A.r.m.s)						

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WV(V) Cap.(μF)	420(W6)				450(2W)				500(2H)			
47					22×25 0.48							
56	22×25 0.52				22×30 0.57							
68	22×30 0.59				22×30 0.59	25×25 0.59					25X25 0.51	30X25 0.66
82	22×30 0.67	25×25 0.65			22×35 0.67	25×30 0.67						
100	22×35 0.78	25×30 0.78			22×40 0.75	25×30 0.74	30×25 0.76	25X35 0.78				
120	22×40 0.88	25×30 0.81	30×25 0.82		22×45 0.84	25×35 0.84	30×30 0.84					25X35 0.85
150	22×45 0.97	25×35 0.94	30×30 0.94		25X35 0.9	25×40 0.97	30×35 0.97	25X30 0.86	35X30 1.02			
180		25×40 1.04	30×35 1.07			25×45 1.08	30×35 1.06	35×30 1.09				
220		25×50 1.21	30×35 1.18	35×30 1.19			30×40 1.21	35×35 1.23	35X40 1.21			
270			30×45 1.4	35×35 1.36			30×50 1.45	35×40 1.42				
330			30×50 1.57	35×40 1.58				35×45 1.63				
390				35×45 1.78				35×50 1.81				
470				35×50 1.90	35×60 1.92	← Case size: ΦD×L(mm) ← Maximum allowable ripple current at 105°C/120Hz(A.r.m.s)						

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