

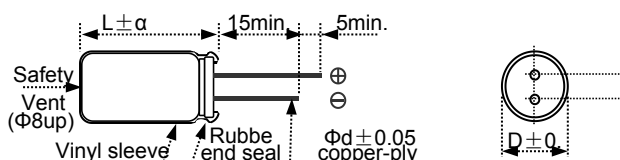
KE Series

- 85°C Standard product, for general purpose, downsized
- RoHS2.0 Compliant

◆ **规格表 Specifications**

项目 Items	特性参数 Characteristics											
使用温度范围 Category Temperature Range	-40 ~ +85°C (6.3 ~ 100V.DC)					-25 ~ +85°C (160~450V.DC)						
额定工作电压范围 Rated Voltage Range	6.3 ~ 450V.DC											
电容量允许偏差 Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)											
漏电流 Leakage Current	6.3~ 100V.DC					160~ 450V.DC						
	I≤0.01CV or 3μA, 二者取大值 (施加额定工作电压2分钟后) Whichever is greater (After 2 minute application of rated voltage)					I≤0.02CV+10(μA) (施加额定工作电压2分钟后) (After 2 minute 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	Rate Voltage(V)	6.3	10	16	25	35	50	63	100	160 ~ 250	315 ~ 400	450
	tanδ (Max)	0.28	0.24	0.20	0.16	0.14	0.12	0.09	0.08	0.20	0.24	0.24
当标称容量超过1000μF时, 每增加1000μF, 损耗角正切值增加0.02。 For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz at 20°C												
低温特性 Stability at Low Temperature Impedance Ratio (Max)	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. (at 120Hz)											
Impedance Ratio (Max)	Rated voltage(V)	6.3	10	16	25	35	50	63~100	160~250	315~400	450	
	Z(-25°C)/Z(+20°C)	≤Φ8	5	4	3	2	2	2	2	3	4	6
		≥Φ10	5	4	3	2	2	2	2	3	4	6
	Z(-40°C)/Z(+20°C)	≤Φ8	12	10	8	5	4	3	3	8	8	-
≥Φ10		12	10	8	5	4	3	3	4	6	-	
耐久性 Endurance	在85°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, 连续加载2000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 subjected to rated voltage with the allowable maximum ripple current is applied for 2000 hours at 85°C.											
Endurance	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85°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。 After storing the capacitors under no load at 105°C for 1000 hours and then restoring to 20°C, they shall meet the specified values listed as below.											
Shelf Life	Rated Voltage	6.3 ~ 100V.DC					160 ~ 450V.DC					
	Capacitance change	≅±20% of the initial value					≅±20% of the initial value					
	D.F.(tanδ)	≅200% of the initial specified value					≅200% of the initial specified value					
	Leakage current	≅The initial specified value					≅200% of the initial specified value					

◆ **尺寸图 (单位: mm) DIMENSIONS (Unit:mm)**



ΦD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8

α	(L<20)1.5
	(L≥20)2.0

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

● **频率系数 Frequency Coefficient**

Frequency(H) Coefficient	50	120	300	1k	10k	100k
Capacitance(μF)						
1~ 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 ~ 68	0.75	1.00	1.25	1.50	1.75	1.80
100 ~ 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 ~	0.85	1.00	1.03	1.05	1.08	1.08

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◆ 标准品一览表 Standard Ratings

WV (Vdc)	Cap (μF)	Case size ΦD*L(mm)	Rated ripple current (mArms) 105°C/120Hz	WV (Vdc)	Cap (μF)	Case size ΦD*L(mm)	Rated ripple current (mArms) 105°C/120Hz
6.3	1000	8X12	540	35	47	5X11	130
	2200	10X16	890		68	6.3X11	160
	3300	10X20	1190		100	6.3X11	210
	4700	13X20	1550		220	8X12	385
	6800	13X25	1920		330	10X13	490
	10000	16X26	2350		470	10X16	650
	15000	16X32	2550		1000	13X20	1150
	22000	18X35	3200		2200	16X26	1800
10	220	5X11	240		3300	16X32	2100
	330	6.3X11	290		4700	16X35	2500
	470	6.3X11	35	6800	18X40	2800	
	1000	10X13	650	50	1	5X11	17
	2200	10X16	990		2.2	5X11	28
	3300	13X20	1450		3.3	5X11	35
	4700	13X25	1800		4.7	5X11	41
	6800	16X26	2250		10	5X11	60
	10000	16X32	2550		22	5X11	95
	15000	16X35	2880		33	5X11	125
22000	18X40	3400	47		6.3X11	155	
16	220	6.3X11	260		68	6.3X11	210
	330	6.3X11	320		100	8X12	260
	470	8X12	440	220	10X13	430	
	1000	10X13	700	330	10X16	590	
	2200	10X20	1000	470	10X20	760	
	3300	13X25	1700	1000	13*25	1350	
	4700	16X26	2100	2200	16*32	1980	
	6800	16X26	2250	3300	18X35	2500	
	10000	16X35	2710	63	22	5X11	100
	15000	18X40	3100		33	6.3X11	140
25	100	5X11	180		47	6.3X11	170
	220	6.3X11	280		68	8X12	220
	330	8X12	350		100	8X12	280
	470	10X13	475		220	10X16	490
	1000	10X16	860		330	10X20	710
	2200	13X25	1550		470	13X20	900
	3300	16X26	1980		1000	16X26	1300
	4700	16X26	2200		2200	18X35	2300
	6800	16X35	2600				
	10000	18X40	2800				

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◆ 标准品一览表 **Standard Ratings**

WV (Vdc)	Cap (μF)	Case size ΦD*L(mm)	Rated ripple current (mA _{rms}) 105°C/120Hz	WV (Vdc)	Cap (μF)	Case size ΦD*L(mm)	Rated ripple current (mA _{rms}) 105°C/120Hz	
100	1	5X11	21	250	3.3	6.3X11	40	
	2.2	5X11	30		4.7	6.3X11	50	
	3.3	5X11	40		10	10X13	100	
	4.7	5X11	45		22	10X20	170	
	10	5X11	70		33	10X20	200	
	22	6.3X11	130		47	13X20	270	
	33	8X12	180		68	16X26	380	
	47	8X12	200		100	16X26	440	
	68	10X13	270		220	18X35	680	
	100	10X16	340		350	2.2	6.3X11	30
	220	13X20	550			3.3	8X12	46
	330	13X25	760			4.7	8X12	55
	470	16X26	1000			10	10X13	90
	1000	18X35	1350			22	13X20	185
160	10	8X12	80	33		13X25	240	
	22	10X13	130	47		16X26	325	
	33	10X16	180	68		16X26	400	
	47	10X20	210	100		18X32	530	
	68	13X20	350	400		1	6.3X11	22
	100	13X25	430			2.2	8X12	38
	220	16X32	760			3.3	8X12	48
	330	18X35	995			4.7	10X13	60
470	18X40	1200	10			10X16	90	
200	1	6.3X11	22		22	13X25	205	
	2.2	6.3X11	33		33	16X26	275	
	3.3	6.3X11	40		47	16*26	280	
	4.7	6.3X11	50		68	16X32	340	
	10	8X12	80		100	18X35	440	
	22	10X16	150		450	2.2	8X12	28
	33	10X20	205			3.3	10X13	40
	47	13X20	270			4.7	10X13	46
	68	13X25	350			10	10X20	80
	100	16X26	475	22		13X25	140	
	220	16X35	700	33		16X26	180	
	33	18X40	950	47		16X32	220	
			68	16X35		260		
			100	18X40		280		

※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.