

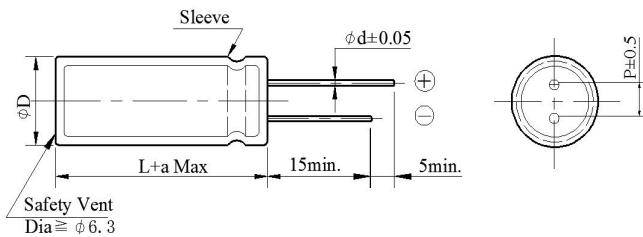
KE Series

- Standard series for general purpose .
- 2,000 hours assured at 85°C.

◆ SPECIFICATIONS

Item	Performance Characteristics											
Category Temperature Range	-40 ~ +85°C						-25 ~ +85°C					
Working Voltage Range	6.3 ~ 100Vdc						160 ~ 550Vdc					
Capacitance Range	2.2 ~ 22,000µF						2.2 ~ 470 µF					
Capacitance Tolerance	±20% (at 20°C and 120Hz)											
Dissipation Factor (tan δ) (at 20°C, 120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160 ~ 250	350 ~ 500	550
	tan δ(Max)	0.26	0.22	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20	0.25
The above values should be increased by 0.02 for every additional 1000µF												
Leakage Current	I ≤ 0.01CV or 3µA whichever is greater (6.3 ~ 100V) I ≤ 0.02CV + 10µA (160 ~ 550V) I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Apply rated voltage the rated voltage for 2 minutes.											
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 ~ 250	350 ~ 500	550
Low Temperature Characteristics Impedance Ratio(MAX)	Z(-25°C)/Z(+20°C)	5	4	3	2	2	2	2	2	6	6	8
	Z(-40°C)/Z(+20°C)	12	10	8	5	4	3	3	3	—	—	—
	(at 120Hz)											
Endurance	The following requirements shall be satisfied when the capacitor are restored to 20°C after the rated voltage applied for 2,000 hours at 85°C.											
	Capacitance change	≅ ±20% of the initial value										
	Dissipation factor(tan δ)	≅ 200% of the specified value										
	Leakage current	≅ specified value										
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 20°C after the rated voltage applied for 1,000 hours at 85°C without voltage applied.											
	Capacitance change	≅ ±20% of the initial value										
	Dissipation factor(tan δ)	≅ 200% of the specified value										
	Leakage current	≅ 200% of the specified value										
Others	Conforms to JIS-C-5101-4 (1998) and IEC 60384-4											

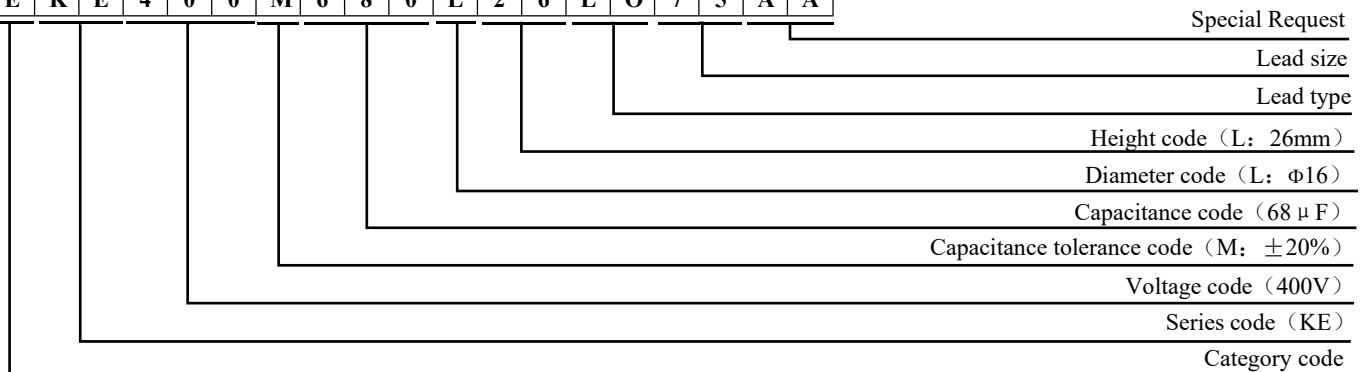
◆ DIMENSIONS(mm)



ΦD	5	6.3	8	10	12.5/13	16	18	20	22
ΦD	ΦD ± 0.5 Max								
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8	1.0	1.0
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10
a	< 20 L ± 1.5Max ≧ 20 L ± 2.0Max								

◆ PART NUMBER SYSTEM(Example :400V 68µF)

E K E 4 0 0 M 6 8 0 L 2 6 L O 7 5 A A



KE Series

◆ Case size & Permissible rated ripple current: (mA rms) at 85°C / 120Hz

WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)	WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)
6.3	22	5×11	65	10	22	5×11	65
	33	5×11	80		33	5×11	85
	47	5×11	95		47	5×11	100
	68	5×11	100		68	5×11	110
	100	5×11	134		100	5×11	150
	150	5×11	150		150	5×11	160
	220	5×11	220		220	5×11	220
	330	6.3×11	280		330	6.3×11	300
	470	6.3×11	360		470	6.3×11	360
	680	8×12	503		680	8×12	580
	1000	8×12	590		1000	10×13	650
	2200	10×16	930		2200	10×16	1090
	3300	10×20	1230		3300	12.5×20	1450
	4700	12.5×20	1520		4700	12.5×25	1790
	6800	12.5×25	1920		6800	16×25	2250
	10000	16×25	2370		10000	16×32	2550
15000	16×35	2590	15000	18×35	2880		
22000	18×35	3220	22000	18×40	3400		
16	10	5×11	40	25	4.7	5×11	30
	22	5×11	75		10	5×11	55
	33	5×11	90		22	5×11	80
	47	5×11	115		33	5×11	95
	68	5×11	120		47	5×11	120
	100	5×11	175		68	6.3×11	145
	150	6.3×11	210		100	6.3×11	190
	220	6.3×11	280		150	6.3×11	210
	330	8×12	370		220	8×11	370
	470	8×12	460		330	8×12	440
	680	10×13	690		470	10×12	550
	1000	10×13	720		680	10×16	605
	2200	12.5×20	1555		1000	10×20	930
	3300	12.5×25	1990		2200	10×25	1200
	4700	16×26	2100		3300	16×26	1980
	6800	16×32	2280		4700	16×32	2140
10000	18×35	2750	6800	16×35	2600		

KE Series

Case size & Permissible rated ripple current: (mA rms) at 85°C / 120Hz

WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)	WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)
35	3.3	5×11	30	50	3.3	5×11	35
	4.7	5×11	35		4.7	5×11	41
	10	5×11	60		10	5×11	60
	22	5×11	90		22	5×11	95
	33	5×11	110		33	5×11	125
	47	5×11	135		47	6.3×11	160
	68	6.3×11	160		68	6.3×11	210
	100	6.3×11	215		100	8×12	260
	150	8×12	290		150	10×13	345
	220	8×11	385		220	10×13	430
	330	10×13	490		330	10×16	590
	470	10×16	650		470	10×20	760
	680	10×20	820		680	12.5×20	875
	1000	13×20	1200		1000	13×25	1360
	2200	16×25	1880		2200	16×35	2060
3300	16×32	2100	3300	18×35	2500		
4700	16×35	2500					
63	2.2	5×11	30	100	2.2	5×11	34
	3.3	5×11	37		3.3	5×11	42
	4.7	5×11	45		4.7	5×11	50
	10	5×11	70		10	6.3×11	80
	22	5×11	100		22	6.3×11	130
	33	6.3×11	140		33	8×12	180
	47	6.3×11	170		47	10×16	300
	68	8×12	220		68	10×13	270
	100	10×13	330		100	10×16	340
	150	10×13	345		150	12.5×20	490
	220	10×16	490		220	12.5×20	550
	330	10×20	710		330	12.5×25	760
	470	16×15	850		470	16×25	1000
	680	12.5×25	1000		680	16×35	1100
1000	16×25	1310	1000	18×35	1350		
2200	20×35	2500					
160	2.2	6.3×11	26	200	2.2	6.3×11	26
	3.3	6.3×11	35		3.3	6.3×11	35
	4.7	6.3×11	40		4.7	8×12	45
	10	8×12	65		10	8×12	70
	22	10×16	110		22	10×20	110
	33	10×20	150		33	10×20	160
	47	12.5×20	180		47	12.5×20	180
	68	12.5×25	230		68	12.5×25	230
	82	12.5×25	250		82	12.5×25	260
	100	12.5×25	300		100	16×25	330
	120	12.5×25	325		120	16×25	350
	150	16×25	360		150	16×32	400
	180	16×32	415		180	16×35	430
	220	16×32	510		220	16×35	520
	330	18×35	600		330	18×35	635
470	18×40	700	470	18×40	705		

KE Series

Case size & Permissible rated ripple current: (mA rms) at 85°C / 120Hz

WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)	WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Max. Rated ripple current @85°C/120Hz (mA rms)
250	2.2	6.3×11	30	350	2.2	8×12	28
	3.3	8×12	35		3.3	8×12	35
	4.7	8×12	45		4.7	10×13	41
	10	10×13	70		10	10×16	70
	22	10×20	130		22	12.5×20	110
	33	12.5×20	160		33	12.5×25	140
	47	12.5×20	210		47	16×25	220
	68	16×25	250		68	16×32	260
	82	16×25	265		82	18×32	270
	100	16×32	310		100	18×32	305
	120	16×32	345		120	18×32	340
	150	16×35	530		150	18×35	380
	180	18×35	540		180	18×40	410
220	18×35	600					
330	18×40	650					
400	1	6.3×11	18	450	1	8×12	19
	2.2	8×12	28		2.2	8×12	25
	3.3	8×12	32		3.3	10×13	32
	4.7	10×16	41		4.7	10×16	50
	10	10×20	70		10	12.5×16	75
	22	12.5×25	110		22	12.5×25	110
	33	16×25	140		33	16×25	150
	47	16×25	160		47	16×32	220
	68	16×35	280		68	18×32	310
	82	18×32	290		82	18×35	330
	100	18×32	300		100	18×40	360
	120	18×35	330		120	18×45	400
	150	18×40	360				
180	18×45	400					
500	1	6.3×11	19	550	1	6.3×11	20
	2.2	8×12	28		2.2	8×15	30
	3.3	10×13	35		3.3	10×16	40
	4.7	10×16	55		4.7	10×20	60
	10	12.5×20	78		10	12.5×25	85
	22	12.5×30	135		22	12.5×35	150
	33	16×25	160		33	16×32	180
	47	16×32	240		47	16×35	280
	68	18×32	350		68	18×35	400
	82	18×35	380		82	18×40	430
	100	18×40	430		100	18×45	480
120	18×45	480	120	18×50	550		

◆ **RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz)				
		50/60	120	1K	10K	100K
6.3 ~ 100	0.1 ~ 68	0.75	1.00	1.75	2.30	2.50
	100 ~ 680	0.80	1.00	1.50	1.60	1.70
	1000 ~ 22000	0.85	1.00	1.15	1.40	1.50
160 ~ 550	0.47 ~ 220	0.80	1.00	1.40	1.55	1.70
	330 ~ 470	0.90	1.00	1.13	1.40	1.13