

FK series 105°C LONG LIFE, HIGH RELIABILITY

- 105°C Long Life 3000~ 4000hours
- High Reliability
- High quality

■ SPECIFICATIONS

Item	Performance Characteristics								
Operating Temperature Range	-40°C~105°C(160V~400VDC) -25°C~105°C(450VDC)								
Rated Voltage Range	160~450V								
Capacitance Range	0.47~330uF								
Capacitance Tolerance	±20%, 120Hz, 20°C								
Leakage Current (MAX)	CV ≤ 1000	CV > 1000							
	I = 0.1CV + 40uA (1 minutes) I = 0.03CV + 15uA (5 minutes)	I = 0.04CV + 100uA (1 minutes) I = 0.02CV + 25uA (5 minutes)							
Dissipation Factor (tan δ)	When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with increase of every 1000uF.								
	Rated voltage(V)	160	200	250	350	400	450	MAX (20°C/120Hz)	
Tan δ	0.20			0.24					
Low Temperature Stability Impedance Ratio	Rated voltage(V)	160	200	250	350	400	450	MAX (120Hz)	
	Z(-25°C) / Z(+20°C)	3	3	3	5	5	5		
	Z(-40°C) / Z(+20°C)	4	4	4	6	6	6		
Load Life	After life test at conditions stated in the table below, the capacitors shall meet the following requirement.								
	Leakage Current	Not more than the specified						Case Dia	Life Time (hrs)
	Capacitance Change	Within ±20% of initial value						ΦD ≤ 8	3000
	Dissipation Factor	Not more than 200% of the specified						ΦD = 10	3000
							ΦD ≥ 13	4000	
Shelf Life	After leaving capacitors under no load at 105°C for 1000hours and applying voltage according to JIS C-5102 4-3, they meet the specified value for load life characteristics listed above.								
Standard	According to JIS C 5141								

■ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

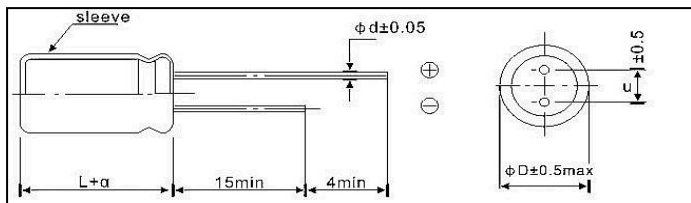
Frequency(Hz)	60(50)	120	500	1k	10k ≤
0.47-82	0.8	1.0	1.25	1.30	1.50
100-330	0.8	1.0	1.10	1.15	1.20

Temperature coefficient

Temperature	40°C	55°C	65°C	75°C	85°C	105°C
Coefficient	2.41	2.41	2.12	2.00	1.70	1.00

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■ DIMENSIONS (mm)



ΦD	5	6.3	8	10	13	16	18
Φd	0.5			0.6		0.8	
F	2.0	2.5	3.5	5.0		7.5	
α	L≤16 : α=1.5				L≥16 : α=2.0		

■ STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size ΦD×L(mm) Ripple Current (mA 105°C, 120Hz) r.m.s

W. V Cap (uF)	160		200		250		350		400		450	
	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple
0.47					6.3×12	9	6.3×12	11				
1					6.3×12	13	6.3×12	16	6.3×12	20	6.3×12	29
2.2					6.3×12	23	6.3×12	25	6.3×12	26	10×13	45
3.3			6.3×12	26	6.3×12	35	8×12	40	10×13	45	10×13	65
4.7	6.3×12	35	6.3×12	40	8×16	50	10×13	60	8×12	45	10×17	85
5.6									10×13	70		
6.8					8×16	60			10×13	70	10×14	90
10	8×12	60	10×13	70	10×17	75	10×20	80	10×14	75	10×16	120
									10×17	85	13×15	110
									10×20	95	13×21	140
15									13×15	194	13×15	150
											13×17	160
22	10×17	110	10×20	125	10×20	130	13×21	135	13×17	130	16×21	175
	10×20	120			16×17	140			13×21	140	16×25	200
33	10×20	145	10×20	165	13×21	170	16×25	195	13×25	195	16×21	220
									16×18	190		
									16×21	200	16×31	250
									16×25	240		
47	10×20	195	13×21	200	13×25	220	16×25	230	16×21	230	16×32	265
									16×25	250		
									16×27	260	16×35	282
									18×25	280		
56	13×21	211	13×21	233	13×25	244	16×31	255	16×31	282	16×35	325
68	13×21	233	13×25	253	16×25	275	16×31	288	16×30	315	18×31	375
									18×25	300		
									18×31	325		
82	13×25	258	16×25	290	16×25	312	18×31	325	18×31	375	18×35	440
100	13×25	290	16×25	335	16×31	360	18×31	375	18×31	440	18×35	510
120	16×25	330	16×31	385	18×31	415	18×35	430	18×32	460		
									18×35	510		
150			10×25	400								
220	16×31	540	16×35	580	18×35	710						
330	18×35	700	18×25	500	18×40	885						
			18×35	785								