

PFA Series

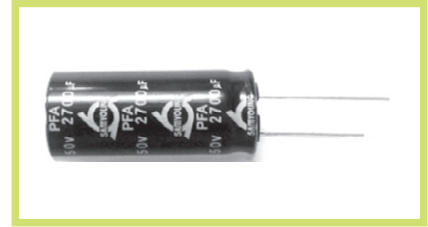
• 135°C 2,000Hrs assured.

Solvent-proof

- Low ESR.
- Wide Temperature range.
- Suitable to fit for automotive equipment.
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.



Wide Temp.

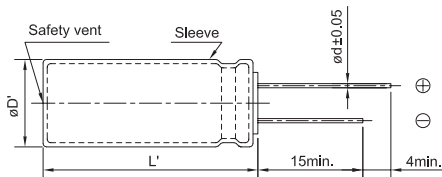


SPECIFICATIONS

Item	Characteristics															
Rated Voltage Range	10 ~ 100 V _{dc}															
Operating Temperature Range	-40 ~ +135°C															
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)															
Leakage Current	I = 0.03CV (μA) or 4μA, whichever is greater. Where, I:Max. leakage current(μA),C:Nominal capacitance(μF),V:Rated voltage(V _{dc}) (at 20°C, 1 minute)															
Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated Voltage(V_{dc})</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50~63</td> <td>80~100</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> </tr> </table> (at 20°C, 120Hz)	Rated Voltage(V _{dc})	10	16	25	35	50~63	80~100	Tanδ(Max.)	0.20	0.16	0.14	0.12	0.10	0.08	
Rated Voltage(V _{dc})	10	16	25	35	50~63	80~100										
Tanδ(Max.)	0.20	0.16	0.14	0.12	0.10	0.08										
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(V_{dc})</td> <td>10</td> <td>16~35</td> <td>50~80</td> <td>100</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>3</td> <td>2</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>6</td> <td>4</td> <td>5</td> <td>6</td> </tr> </table> (at 120Hz)	Rated Voltage(V _{dc})	10	16~35	50~80	100	Z(-25°C)/Z(20°C)	3	2	3	3	Z(-40°C)/Z(20°C)	6	4	5	6
Rated Voltage(V _{dc})	10	16~35	50~80	100												
Z(-25°C)/Z(20°C)	3	2	3	3												
Z(-40°C)/Z(20°C)	6	4	5	6												
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied for 2,000 hours at 135°C. Capacitance change ≤ ±30% of the initial value Tanδ ≤ 300% of the initial specified value Leakage Current ≤ The initial specified value															
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 135°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≤ ±30% of the initial value Tanδ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value															
Others	Satisfied characteristics KS C IEC 60384-4															

DIMENSIONS OF PFA Series

Unit(mm)



Marking : BLACK SLEEVE, WHITE INK

øD	12.5	16	18
ød	0.6	0.8	0.8
F	5.0	7.5	7.5
øD'	øD + 0.5 max.		
L'	L + 2.0 max.		

RATINGS OF PFA Series

∅ D×L(mm)	10			16			25					
	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)
		20°C	-40°C			20°C	-40°C			20°C	-40°C	
12.5 × 20	2,400	0.045	0.51	1,220	1,700	0.045	0.51	1,220	1,500	0.045	0.51	1,220
12.5 × 25	3,000	0.041	0.37	1,540	2,100	0.041	0.37	1,540	1,900	0.041	0.37	1,540
12.5 × 35	4,500	0.032	0.27	2,720	3,100	0.032	0.27	2,720	2,700	0.032	0.27	2,720
12.5 × 40	5,500	0.027	0.21	3,000	3,800	0.027	0.21	3,000	3,300	0.027	0.21	3,000
16 × 20	4,100	0.038	0.29	1,390	2,900	0.038	0.29	1,390	2,200	0.038	0.29	1,390
16 × 25	5,400	0.031	0.24	2,400	3,700	0.031	0.24	2,400	3,300	0.031	0.24	2,400
16 × 35.5	8,300	0.023	0.16	3,160	5,700	0.023	0.16	3,160	4,700	0.023	0.16	3,160
16 × 40	9,500	0.022	0.14	3,460	6,600	0.022	0.14	3,460	5,600	0.022	0.14	3,460
18 × 20	5,600	0.037	0.24	1,400	3,900	0.037	0.24	1,400	3,300	0.037	0.24	1,400
18 × 25	5,200	0.030	0.21	2,430	5,700	0.030	0.21	2,430	4,700	0.030	0.21	2,430
18 × 35.5	11,000	0.022	0.14	3,280	7,800	0.022	0.14	3,280	6,800	0.022	0.14	3,280
18 × 40	14,000	0.021	0.12	3,610	9,600	0.021	0.12	3,610	8,200	0.021	0.12	3,610

∅ D×L(mm)	35			50			63					
	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)
		20°C	-40°C			20°C	-40°C			20°C	-40°C	
12.5 × 20	1,000	0.045	0.51	1,220	560	0.073	0.88	1,000	330	0.110	1.33	900
12.5 × 25	1,200	0.041	0.37	1,540	680	0.066	0.76	1,790	470	0.100	1.16	1,611
12.5 × 35	1,800	0.032	0.27	2,720	1,000	0.049	0.51	2,310	680	0.083	0.87	2,079
12.5 × 40	2,200	0.027	0.21	3,000	1,200	0.040	0.39	2,550	820	0.068	0.66	2,295
16 × 20	1,500	0.038	0.29	1,390	820	0.053	0.58	1,400	560	0.090	0.99	1,260
16 × 25	1,800	0.031	0.24	2,400	1,200	0.045	0.47	2,030	820	0.077	0.80	1,827
16 × 35.5	2,700	0.023	0.16	3,160	1,800	0.030	0.28	2,690	1,200	0.054	0.47	2,421
16 × 40	3,300	0.022	0.14	3,460	2,200	0.032	0.28	2,950	1,500	0.051	0.48	2,655
18 × 20	1,800	0.038	0.25	1,400	1,000	0.046	0.48	1,640	680	0.078	0.82	1,476
18 × 25	2,400	0.030	0.21	2,430	1,500	0.036	0.35	2,060	1,000	0.061	0.59	1,854
18 × 35.5	3,900	0.022	0.14	3,280	2,200	0.027	0.23	2,920	1,500	0.046	0.38	2,628
18 × 40	4,700	0.021	0.12	3,610	2,700	0.026	0.18	3,230	1,800	0.044	0.31	2,907

∅ D×L(mm)	80			100				
	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)	μF	ESR (Ω max./100kHz)		Rated Ripple Current (mArms) (135°C, 100kHz)
		20°C	-40°C			20°C	-40°C	
12.5 × 20	220	0.120	1.45	800	150	0.120	1.45	800
12.5 × 25	330	0.105	1.21	1,432	180	0.105	1.21	1,432
12.5 × 35	470	0.088	0.92	1,848	330	0.088	0.92	1,848
12.5 × 40	560	0.072	0.70	2,040	390	0.072	0.70	2,040
16 × 20	390	0.095	1.05	1,120	270	0.095	1.05	1,120
16 × 25	560	0.081	0.85	1,624	330	0.081	0.85	1,624
16 × 35.5	820	0.058	0.50	2,152	470	0.058	0.50	2,152
16 × 40	1,000	0.054	0.51	2,360	680	0.054	0.51	2,360
18 × 20	520	0.083	0.87	1,312	330	0.083	0.87	1,312
18 × 25	680	0.065	0.63	1,648	470	0.065	0.63	1,648
18 × 35.5	1,000	0.049	0.41	2,336	760	0.049	0.41	2,336
18 × 40	1,200	0.047	0.33	2,584	820	0.047	0.33	2,584

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(μF)	120	1k	10k	50k	100k
180~2,100	0.40	0.75	0.90	0.93	1.00
2,200~3,900	0.50	0.90	0.95	0.96	1.00
4,100~14,000	0.85	0.95	0.98	0.99	1.00