

## PFD Series

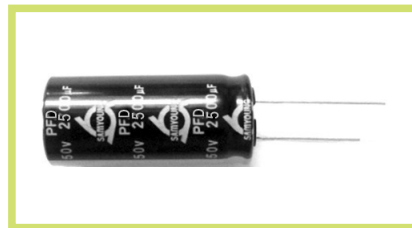
• 135°C 2,000Hrs, 125°C 5,000Hrs assured.

- Low ESR.
- Wide Temperature range.
- Suitable to fit for automotive equipment.
- RoHS compliant.
- Halogen-free capacitors are also available.

PFA

PFD

High ripple, Downsized



## SPECIFICATIONS

Item	Characteristics						
Rated Voltage Range	50 ~ 80 V <sub>dc</sub>						
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 <sub>dc</sub> ) (at 20°C, 1 minute)						
Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated Voltage(V<sub>dc</sub>)</td> <td>50~80</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.10</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20°C, 120Hz)</p>	Rated Voltage(V <sub>dc</sub> )	50~80	Tanδ(Max.)	0.10		
Rated Voltage(V <sub>dc</sub> )	50~80						
Tanδ(Max.)	0.10						
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(VDC)</td> <td>50~80</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>6</td> </tr> </table> <p>(at 120Hz)</p>	Rated Voltage(VDC)	50~80	Z(-25°C)/Z(+20°C)	3	Z(-40°C)/Z(+20°C)	6
Rated Voltage(VDC)	50~80						
Z(-25°C)/Z(+20°C)	3						
Z(-40°C)/Z(+20°C)	6						
Load Life	<p>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 (the peak voltage shall not exceed the rated voltage) for 2,000 hours at 135°C, 5,000 hours at 125°C.</p> <p>Capacitance change ≤ ±30% of the initial value Tanδ ≤ 300% of the initial specified value Leakage Current ≤ The initial specified value</p>						
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing for 1,000 hours at 135°C, 125°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.</p> <p>Capacitance change ≤ ±30% of the initial value Tanδ ≤ 300% of the initial specified value Leakage current ≤ The initial specified value</p>						
Others	Satisfied characteristics KS C IEC 60384-4						

## DIMENSIONS OF PFD Series

Unit(mm)

Marking : BLACK SLEEVE, WHITE INK

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

## RATINGS OF PFD Series

Vdc	Capacitance (μF)	∅D×L(mm)	ESR (Ω max./100kHz)		Rated Ripple Current (mA <sub>rms</sub> /125°C, 100μF)	Rated Ripple Current (mA <sub>rms</sub> /135°C, 100μF)
			20°C	-40°C		
50	1000	16 x 20	0.050	0.550	2960	1870
	1300	16 x 25	0.042	0.440	4040	2500
		18 x 20	0.042	0.440	3130	2110
	1600	16 x 31.5	0.035	0.360	5130	2960
	1800	18 x 25	0.033	0.320	4230	2530
	2200	16 x 35.5	0.029	0.270	5480	3160
	2400	18 x 31.5	0.028	0.250	5240	3020
	2500	16 x 40	0.025	0.220	5930	3420
3000	18 x 35.5	0.024	0.200	5870	3390	
3600	18 x 40	0.023	0.160	6420	3700	
63	680	16 x 20	0.053	0.340	2140	1910
	820	16 x 25	0.038	0.230	2940	2680
	910	18 x 20	0.044	0.260	2350	2100
	1200	16 x 31.5	0.034	0.200	3860	3050
		18 x 25	0.033	0.190	3080	2810
	1400	16 x 35.5	0.027	0.150	4590	3420
	1600	16 x 40	0.025	0.140	5190	3670
		18 x 31.5	0.028	0.150	4080	3220
2000	18 x 35.5	0.022	0.120	5220	3690	
2300	18 x 40	0.021	0.110	5660	3820	
80	470	16 x 20	0.053	0.340	2140	1910
	620	18 x 20	0.044	0.260	2350	2100
	680	16 x 25	0.038	0.230	2940	2680
	820	16 x 31.5	0.034	0.200	3860	3050
		18 x 25	0.033	0.190	3080	2810
	1000	16 x 35.5	0.027	0.150	4590	3420
	1200	18 x 31.5	0.028	0.150	4080	3220
	1300	16 x 40	0.025	0.140	5190	3670
18 x 35.5		0.022	0.120	5220	3690	
1600	18 x 40	0.021	0.110	5660	3820	

## RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz) Cap.(μF)	120	1k	10k	50k	100k
470~910	0.50	0.85	0.94	0.96	1.00
1,000~2,000	0.60	0.87	0.95	0.97	1.00
2200~4,300	0.75	0.90	0.95	0.97	1.00
4700~12,000	0.85	0.95	0.98	0.99	1.00