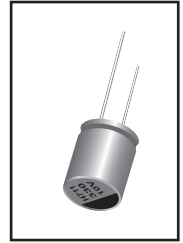
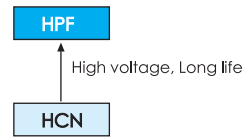


- High Voltage, Long Life, Low ESR, Large Capacitance 105°C, 3000 hours.
- Ultra Low ESR, high ripple current capability
- Applications: DC/DC Converter, Switching Power Supply, LED power etc.
- RoHS Compliant



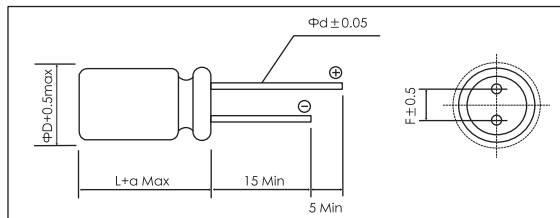
Items	Characteristics
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	16 ~ 200
Capacitance Range (μF) (20°C, 120Hz)	4.7 ~ 1200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Surge Voltage	$U_R \times 1.15$
Leakage Current (μA) ※1	Please see the attached ratings list (20°C, 2min)
Dissipation Factor (20°C, 120Hz)	Please see the attached ratings list
Equivalent Series Resistance (20°C, 100kHz)	Please see the attached ratings list
Temperature Characteristics (Max Impedance Ratio at 100kHz)	$Z_{+105^\circ\text{C}} / Z_{+20^\circ\text{C}} \leq 1.25$ $Z_{-55^\circ\text{C}} / Z_{+20^\circ\text{C}} \leq 1.25$
Endurance	3000h, Rated voltage applied at 105°C Capacitance change: within ± 20% of the initial measured value Dissipation Factor (Tan δ): ≤ 150% of initial specified value ESR: ≤ 150% of initial specified value DC Leakage Current: ≤ the initial specified value
Damp heat(Steady state)	1000h, No-applied voltage 60°C, 90~95% RH Capacitance change: within ± 20% of the initial measured value Dissipation Factor (Tan δ): ≤ 150% of initial specified value ESR: ≤ 150% of initial specified value DC Leakage Current: ≤ the initial specified value (after voltage processing)
Resistance to soldering heat	Flow method (260±5°C x 10s) Capacitance change: within ± 5% of the initial measured value Dissipation Factor (Tan δ): ≤ the initial specified value ESR: ≤ the initial specified value DC Leakage Current: ≤ the initial specified value (after voltage processing)

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C.

Dimensions

mm

(unit:mm)



Size Code	ΦD±0.5	L	amax	F±0.5	Φd±0.05
E05	5	5	1.0	2.0	0.45
F05	6.3	5	1.0	2.5	0.45
F08	6.3	8	1.0	2.5	0.5
B06	8	6	1.0	3.5	0.45
B08	8	8	1.5	3.5	0.6
BAB	8	11.5	1.5	3.5	0.6
CAC	10	12.5	1.5	5.0	0.6

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Size List

U _R [S.V] (V)	16 [18]	20 [23]	2.5 [29]	28 [32]	32 [37]	35 [40]	40 [46]	50 [58]	63 [72]	80 [92]	100 [115]	125 [144]	160 [184]	200 [230]
4.7														BAB
8.2														CAC
10								E05	F05			BAB	BAB	CAC
12								E05	F05			BAB	BAB	CAC
15												BAB	BAB	CAC
18													CAC	
22							E05	F05	F08.B06	B08	CAC	CAC		
27									B06	B08	CAC	CAC		
33						E05	F05	B06	B08	BAB				
39					E05	F05	F05	F08.B06	B08	BAB				
47				E05	F05	F05			BAB	CAC				
56			E05	E05	F05	F05		B08	BAB.CAC	CAC				
68		E05	E05		F05			B08	CAC	CAC				
82		E05		F05			F08.B06	BAB	CAC	CAC				
100	E05		F05			F08.B06		BAB.CAC	CAC	CAC				
120		F05	F05		F08.B06		B08	CAC	CAC					
150	F05	B06		F08.B06		B08	BAB	CAC						
180	F05		F08.B06	B08	B08	BAB	BAB							
220		F08.B06	B06	B08	BAB	BAB	CAC							
270	F08.B06	B06	B08	BAB	BAB		CAC							
330	F08.B06	B08	B08.BAB	BAB			CAC	CAC						
390		B08.BAB	BAB		CAC	CAC								
470	B08.BAB	BAB	BAB.CAC	CAC	CAC									
560	B08.BAB	BAB.CAC	CAC	CAC										
680	BAB	CAC	CAC											
820		CAC												
1000	CAC													
1200	CAC													

Ratings for HPF Series

U _r Code	Rated Capacitance 20°C,120Hz	Max ESR 20°C,100kHz	Rated Ripple Current 105°C,100kHz	Dissipation Factor 20°C,120Hz	Leakage Current 20°C,2min	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mA _{rms})	(%)	(μA)	(mm)	-
16 1C	100	38	1900	12	320	5×5	PCR1CPF101ME05□□
	150	25	2800	12	480	6.3×5	PCR1CPF151MF05□□
	180	25	2800	12	576	6.3×5	PCR1CPF181MF05□□
	270	22	3300	12	864	6.3×8	PCR1CPF271MF08□□
	330	22	3300	12	1056	6.3×8	PCR1CPF331MF08□□
	270	22	3300	12	864	8×6	PCR1CPF271MB06□□
	330	22	3300	12	1056	8×6	PCR1CPF331MB06□□
	470	16	4400	12	1504	8×8	PCR1CPF471MB08□□
	560	16	4400	12	1782	8×8	PCR1CPF561MB08□□
	470	14	4950	12	1504	8×11.5	PCR1CPF471MBAB□□
	560	14	4950	12	1792	8×11.5	PCR1CPF561MBAB□□
	680	14	4950	12	2176	8×11.5	PCR1CPF681MBAB□□
1000	12	5400	12	3200	10×12.5	PCR1CPF102MCAC□□	
1200	12	5400	12	3840	10×12.5	PCR1CPF122MCAC□□	
20 1D	68	40	1900	12	272	5×5	PCR1CPF680ME05□□
	82	40	1900	12	328	5×5	PCR1CPF820ME05□□
	120	28	2650	12	480	6.3×5	PCR1DPF121MF05□□
	150	28	2650	12	600	8×6	PCR1DPF151MB06□□
	220	24	3200	12	880	6.3×8	PCR1DPF221MF08□□
	220	24	3200	12	880	8×6	PCR1DPF221MB06□□
	270	24	3200	12	1080	8×6	PCR1DPF271MB06□□
	330	17	4300	12	1320	8×8	PCR1DPF331MB08□□
	390	17	4300	12	1560	8×8	PCR1DPF391MB08□□
	390	14	4950	12	1560	8×11.5	PCR1DPF391MBAB□□
	470	14	4950	12	1880	8×11.5	PCR1DPF471MBAB□□
	560	14	4950	12	2240	8×11.5	PCR1DPF561MBAB□□
	560	12	5400	12	2240	10×12.5	PCR1DPF561MCAC□□
	680	12	5400	12	2720	10×12.5	PCR1DPF681MCAC□□
	820	12	5400	12	3280	10×12.5	PCR1DPF821MCAC□□
25 1E	56	50	1700	12	280	5×5	PCR1EPF560ME05□□
	68	50	1700	12	340	5×5	PCR1EPF680ME05□□
	100	30	2550	12	500	6.3×5	PCR1EPF101MF05□□
	120	30	2550	12	600	6.3×5	PCR1EPF121MF05□□
	180	24	3200	12	900	6.3×8	PCR1EPF181MF08□□
	180	24	3200	12	900	8×6	PCR1EPF181MB06□□
	220	24	3200	12	1100	8×6	PCR1EPF221MB06□□
	270	18	4100	12	1350	8×8	PCR1EPF271MB08□□
	330	18	4100	12	1650	8×8	PCR1EPF331MB08□□
	330	16	4650	12	1650	8×11.5	PCR1EPF331MBAB□□
	390	16	4650	12	1950	8×11.5	PCR1EPF391MBAB□□
	470	16	4650	12	2350	8×11.5	PCR1EPF471MBAB□□
	470	14	5000	12	2350	10×12.5	PCR1EPF471MCAC□□
	560	14	5000	12	2800	10×12.5	PCR1EPF561MCAC□□
	680	14	5000	12	3400	10×12.5	PCR1EPF681MCAC□□
28 1L	47	50	1700	12	263	5×5	PCR1LPF470ME05□□
	82	33	2450	12	459	6.3×5	PCR1LPF820MF05□□
	150	28	2950	12	840	6.3×8	PCR1LPF151MF08□□
	150	28	2950	12	840	8×6	PCR1LPF151MB06□□
	180	22	3700	12	1008	8×8	PCR1LPF181MB08□□
	220	22	3700	12	1232	8×8	PCR1LPF221MB08□□
	270	18	4350	12	1512	8×11.5	PCR1LPF271MBAB□□
	330	18	4350	12	1848	8×11.5	PCR1LPF331MBAB□□
	470	16	4650	12	2632	10×12.5	PCR1LPF471MCAC□□
560	16	4650	12	3136	10×12.5	PCR1LPF561MCAC□□	
32 1F	39	55	1600	12	250	5×5	PCR1FPF390ME05□□
	68	35	2350	12	435	6.3×5	PCR1FPF680MF05□□
	120	30	2800	12	768	6.3×8	PCR1FPF121MF08□□
	120	30	2800	12	768	8×6	PCR1FPF121MB06□□
	180	24	3600	12	1152	8×8	PCR1FPF181MB08□□
	220	20	4000	12	1408	8×11.5	PCR1FPF221MBAB□□
	270	20	4000	12	1728	8×11.5	PCR1FPF271MBAB□□
	390	18	4400	12	2496	10×12.5	PCR1FPF391MCAC□□
470	18	4400	12	3008	10×12.5	PCR1FPF471MCAC□□	
35 1V	33	55	1600	12	231	5×5	PCR1VPF330ME05□□
	47	35	2350	12	329	6.3×5	PCR1VPF470MF05□□
	56	35	2350	12	392	6.3×5	PCR1VPF560MF05□□
	100	30	2800	12	700	6.3×8	PCR1VPF101MF08□□
	100	30	2800	12	700	8×6	PCR1VPF101MB06□□
	150	24	3600	12	1050	8×8	PCR1VPF151MB08□□
	180	24	3600	12	1260	8×11.5	PCR1VPF181MBAB□□
	220	20	4000	12	1540	8×11.5	PCR1VPF221MBAB□□
	330	18	4400	12	2310	10×12.5	PCR1VPF331MCAC□□
	390	18	4400	12	2730	10×12.5	PCR1VPF391MCAC□□

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Ratings for HPF Series

U _R Code	Rated Capacitance 20°C, 120Hz	Max ESR 20°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Dissipation Factor 20°C, 120Hz	Leakage Current 20°C, 2min	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mA _{rms})	(%)	(μA)	(mm)	-
40 1G	22	60	1550	12	176	5×5	PCR1GPF220ME05□□
	33	40	2200	12	264	6.3×5	PCR1GPF330MF05□□
	39	37	2300	12	312	6.3×5	PCR1GPF390MF05□□
	82	32	2700	12	656	6.3×8	PCR1GPF820MF08□□
	82	32	2700	12	656	8×6	PCR1GPF820MB06□□
	120	26	3500	12	960	8×8	PCR1GPF121MB08□□
	150	26	3500	12	1200	8×11.5	PCR1GPF151MBAB□□
	220	18	4400	12	1760	10×12.5	PCR1GPF221MCAC□□
	270	18	4400	12	2160	10×12.5	PCR1GPF271MCAC□□
330	18	4400	12	2640	10×12.5	PCR1GPF331MCAC□□	
50 1H	10	70	1400	12	100	5×5	PCR1HPF100ME05□□
	12	70	1400	12	120	5×5	PCR1HPF120ME05□□
	22	40	2200	12	220	6.3×5	PCR1HPF220MF05□□
	39	35	2600	12	390	6.3×8	PCR1HPF390MF08□□
	33	35	2600	12	330	8×6	PCR1HPF330MB06□□
	39	35	2600	12	390	8×6	PCR1HPF390MB06□□
	56	29	3300	12	560	8×8	PCR1HPF560MB08□□
	68	29	3300	12	680	8×8	PCR1HPF680MB08□□
	82	25	3800	12	820	8×11.5	PCR1HPF820MBAB□□
	100	25	3800	12	1000	8×11.5	PCR1HPF101MBAB□□
	100	20	4300	12	1000	10×12.5	PCR1HPF101MCAC□□
	120	20	4300	12	1200	10×12.5	PCR1HPF121MCAC□□
	150	20	4300	12	1500	10×12.5	PCR1HPF151MCAC□□
63 1J	10	50	1950	12	126	6.3×5	PCR1JPF100MF05□□
	12	50	1950	12	151	6.3×5	PCR1JPF120MF05□□
	22	45	2350	12	277	6.3×8	PCR1JPF220MF08□□
	22	45	2350	12	277	8×6	PCR1JPF220MB06□□
	27	45	2350	12	340	8×6	PCR1JPF270MB06□□
	33	30	3200	12	416	8×8	PCR1JPF330MB08□□
	39	30	3200	12	491	8×8	PCR1JPF390MB08□□
	47	26	3600	12	592	8×11.5	PCR1JPF470MBAB□□
	56	26	3600	12	706	8×11.5	PCR1JPF560MBAB□□
	56	22	4100	12	706	10×12.5	PCR1JPF560MCAC□□
	68	22	4100	12	857	10×12.5	PCR1JPF680MCAC□□
	82	22	4100	12	1033	10×12.5	PCR1JPF820MCAC□□
	100	22	4100	12	1260	10×12.5	PCR1JPF101MCAC□□
120	22	4100	12	1512	10×12.5	PCR1JPF121MCAC□□	
80 1K	22	36	2900	12	352	8×8	PCR1KPF220MB08□□
	27	36	2900	12	432	8×8	PCR1KPF270MB08□□
	33	32	3200	12	528	8×11.5	PCR1KPF330MBAB□□
	39	32	3200	12	624	8×11.5	PCR1KPF390MBAB□□
	47	28	3600	12	752	10×12.5	PCR1KPF470MCAC□□
	56	28	3600	12	896	10×12.5	PCR1KPF560MCAC□□
2A 100	12	36	3000	12	240	8×11.5	PCR2APF120MBAB□□
	15	36	3000	12	300	8×11.5	PCR2APF150MBAB□□
	22	32	3300	12	440	10×12.5	PCR2APF220MCAC□□
	27	32	3300	12	540	10×12.5	PCR2APF270MCAC□□
2B 125	10	45	2700	12	250	8×11.5	PCR2BPF100MBAB□□
	12	45	2700	12	300	8×11.5	PCR2BPF120MBAB□□
	18	40	3000	12	450	10×12.5	PCR2BPF180MCAC□□
	22	40	3000	12	550	10×12.5	PCR2BPF220MCAC□□
2C 160	8.2	70	2100	12	262	8×11.5	PCR2CPF8R2MBAB□□
	10	60	2400	12	320	10×12.5	PCR2CPF100MCAC□□
	12	60	2400	12	384	10×12.5	PCR2CPF120MCAC□□
2D 200	4.7	120	1600	12	188	8×11.5	PCR2DPF4R7MBAB□□
	8.2	100	1850	12	328	10×12.5	PCR2DPF8R2MCAC□□
	10	100	1850	12	400	10×12.5	PCR2DPF100MCAC□□

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Customer products are available on request.

Frequency coefficient for ripple current

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1