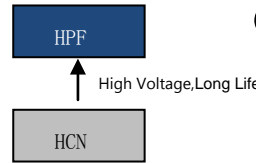


HPF Series



- 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



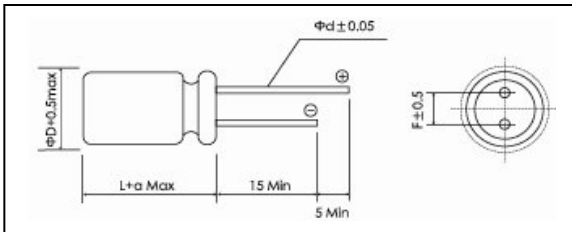
Items	Characteristics
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	16 ~ 200
Capacitance Range (μF) (20°C, 120Hz)	4.7 ~ 1200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Surge Voltage	URx1.15
Leakage Current (μA) ※1	Please see the attached ratings list (20°C, 2min)
Dissipation Factor (20°C, 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	1.0	3.5	0.6
BAB	8	11.5	1.5	3.5	0.6
CAC	10	12.5	1.5	5.0	0.6

Size List

UR [S.V] (V) Cap.(μF)	16 [18]	20 [23]	2.5 [2.9]	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	CAC	CAC
12								E05	F05			BAB	BAB	CAC
15												BAB		
18												CAC		
22							E05	F05	F08,B06	B08	CAC	CAC		
27							E05		B06	B08	CAC			
33						E05		E05	B06	B08	BAB			
39					E05	E05			F08,B06	B08	BAB			
47				E05			F05		BAB	CAC				
56			E05			F05			B08	BAB,CAC	CAC			
68		E05	E05		F05	F05			B08	CAC				
82		E05		F05			F08,B06		BAB	CAC				
100	E05		F05			F08,B06	B06	BAB,CAC	CAC					
120		F05	F05		F08,B06		B06	B08	CAC					
150	F05	B06		F08,B06		B08	B08	CAC						
180		F05		F08,B06	B08	B08	BAB							
220		F08,B06	B06	B08	BAB	BAB	CAC							
270	F08,B06	B06	B08	BAB	BAB	BAB	CAC							
330	F08,B06	B06	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												
1,000	CAC													
1,200	CAC													

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×L	P/N
(v)	(μF)	(mΩ)	(mArms)	(%)	(μA)	(mm)	-
16 1C	100	38	1,900	12	320	5x5	PCR1CPF101ME05□□
	150	25	2,800	12	480	6.3x5	PCR1CPF151MF05□□
	180	25	2,800	12	576	6.3x5	PCR1CPF181MF05□□
	270	22	3,300	12	864	6.3x8	PCR1CPF271MF08□□
	330	22	3,300	12	1,056	6.3x8	PCR1CPF331MF08□□
	270	22	3,300	12	864	8x6	PCR1CPF271MB06□□
	330	22	3,300	12	1,056	8x6	PCR1CPF331MB06□□
	470	16	4,400	12	1,504	8x8	PCR1CPF471MB08□□
	560	16	4,400	12	1,782	8x8	PCR1CPF561MB08□□
	470	14	4,950	12	1,504	8x11.5	PCR1CPF471MBAB□□
	560	14	4,950	12	1,792	8x11.5	PCR1CPF561MBAB□□
	680	14	4,950	12	2,176	8x11.5	PCR1CPF681MBAB□□
	1000	12	5,400	12	3,200	10x12.5	PCR1CPF102MCAC□□
	1200	12	5,400	12	3,840	10x12.5	PCR1CPF122MCAC□□
20 1D	68	40	1,900	12	272	5x5	PCR1CPF680ME05□□
	82	40	1,900	12	328	5x5	PCR1CPF820ME05□□
	120	28	2,650	12	480	6.3x5	PCR1DPF121MF05□□
	150	28	2,650	12	600	6.3x5	PCR1DPF151MF05□□
	220	24	3,200	12	880	6.3x8	PCR1DPF221MF08□□
	220	24	3,200	12	880	8x6	PCR1DPF221MB06□□
	270	24	3,200	12	1,080	8x6	PCR1DPF271MB06□□
	330	17	4,300	12	1,320	8x8	PCR1DPF331MB08□□
	390	17	4,300	12	1,560	8x8	PCR1DPF391MB08□□
	390	14	4,950	12	1,560	8x11.5	PCR1DPF391MBAB□□
	470	14	4,950	12	1,880	8x11.5	PCR1DPF471MBAB□□
	560	14	4,950	12	2,240	8x11.5	PCR1DPF561MBAB□□
	560	12	5,400	12	2,240	10x12.5	PCR1DPF561MCAC□□
	680	12	5,400	12	2,720	10x12.5	PCR1DPF681MCAC□□
820	12	5,400	12	3,280	10x12.5	PCR1DPF821MCAC□□	
25 1E	56	50	1,700	12	280	5x5	PCR1EPF560ME05□□
	68	50	1,700	12	340	5x5	PCR1EPF680ME05□□
	100	30	2,550	12	500	6.3x5	PCR1EPF101MF05□□
	120	30	2,550	12	600	6.3x5	PCR1EPF121MF05□□
	180	24	3,200	12	900	6.3x8	PCR1EPF181MF08□□
	180	24	3,200	12	900	8x6	PCR1EPF181MB06□□
	220	24	3,200	12	1,100	8x6	PCR1EPF221MB06□□
	270	18	4,100	12	1,350	8x8	PCR1EPF271MB08□□
	330	18	4,100	12	1,650	8x8	PCR1EPF331MB08□□
	330	16	4,650	12	1,650	8x11.5	PCR1EPF331MBAB□□
	390	16	4,650	12	1,950	8x11.5	PCR1EPF391MBAB□□
	470	16	4,650	12	2,350	8x11.5	PCR1EPF471MBAB□□
	470	14	5,000	12	2,350	10x12.5	PCR1EPF471MCAC□□
	560	14	5,000	12	2,800	10x12.5	PCR1EPF561MCAC□□
680	14	5,000	12	3,400	10x12.5	PCR1EPF681MCAC□□	
28 1L	47	50	1,700	12	263	5x5	PCR1LPF470ME05□□
	82	33	2,450	12	459	6.3x5	PCR1LPF820MF05□□
	150	28	2,950	12	840	6.3x8	PCR1LPF151MF08□□
	150	28	2,950	12	840	8x6	PCR1LPF151MB06□□
	180	22	3,700	12	1,008	8x8	PCR1LPF181MB08□□
	220	22	3,700	12	1,232	8x8	PCR1LPF221MB08□□
	270	18	4,350	12	1,512	8x11.5	PCR1LPF271MBAB□□
	330	18	4,350	12	1,848	8x11.5	PCR1LPF331MBAB□□
	470	16	4,650	12	2,632	10x12.5	PCR1LPF471MCAC□□
560	16	4,650	12	3,136	10x12.5	PCR1LPF561MCAC□□	
32 1F	39	55	1,600	12	250	5x5	PCR1FPF390ME05□□
	68	35	2,350	12	435	6.3x5	PCR1FPF680MF05□□
	120	30	2,800	12	768	6.3x8	PCR1FPF121MF08□□
	120	30	2,800	12	768	8x6	PCR1FPF121MB06□□
	180	24	3,600	12	1,152	8x8	PCR1FPF181MB08□□
	220	20	4,000	12	1,408	8x11.5	PCR1FPF221MBAB□□
	270	20	4,000	12	1,728	8x11.5	PCR1FPF271MBAB□□
	390	18	4,400	12	2,496	10x12.5	PCR1FPF391MCAC□□
470	18	4,400	12	3,008	10x12.5	PCR1FPF471MCAC□□	
35 1V	33	55	1,600	12	231	5x5	PCR1VPF330ME05□□
	39	55	1,600	12	273	5x5	PCR1VPF390ME05□□
	56	35	2,350	12	392	6.3x5	PCR1VPF560MF05□□
	68	35	2,350	12	476	6.3x5	PCR1VPF680MF05□□
	100	30	2,800	12	700	6.3x8	PCR1VPF101MF08□□
	100	30	2,800	12	700	8x6	PCR1VPF101MB06□□
	120	30	2,800	12	849	8x6	PCR1VPF121MB06□□
	150	24	3,600	12	1,050	8x8	PCR1VPF151MB08□□
	180	24	3,600	12	1,260	8x8	PCR1VPF181MB08□□
	220	20	4,000	12	1,540	8x11.5	PCR1VPF221MBAB□□
	270	20	4,000	12	1,890	8x11.5	PCR1VPF271MBAB□□
	330	18	4,400	12	2,310	10x12.5	PCR1VPF331MCAC□□
390	18	4,400	12	2,730	10x12.5	PCR1VPF391MCAC□□	

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×L	P/N
(v)	(μF)	(mΩ)	(mA _{RMS})	(%)	(μA)	(mm)	-
40 1G	22	60	1,550	12	176	5x5	PCR1GPF220ME05□□
	27	60	1,550	12	216	5x5	PCR1GPF270ME05□□
	47	37	2,300	12	376	6.3x5	PCR1GPF470MF05□□
	82	32	2,700	12	656	6.3x8	PCR1GPF820MF08□□
	82	32	2,700	12	656	8x6	PCR1GPF820MB06□□
	100	32	2,700	12	800	8x6	PCR1GPF101MB06□□
	120	26	3,500	12	960	8x8	PCR1GPF121MB08□□
	150	26	3,500	12	1,200	8x8	PCR1GPF151MB08□□
	180	21	3,900	12	1,400	8x11.5	PCR1GPF181MBAB□□
	220	18	4,400	12	1,760	10x12.5	PCR1GPF221MCAC□□
	270	18	4,400	12	2,160	10x12.5	PCR1GPF271MCAC□□
	330	18	4,400	12	2,640	10x12.5	PCR1GPF331MCAC□□
50 1H	10	70	1,400	12	100	5X5	PCR1HPF100ME05□□
	12	70	1,400	12	120	5x5	PCR1HPF120ME05□□
	22	40	2,200	12	220	6.3x5	PCR1HPF220MF05□□
	39	35	2,600	12	390	6.3x8	PCR1HPF390MF08□□
	33	35	2,600	12	330	8x6	PCR1HPF330MB06□□
	39	35	2,600	12	390	8x6	PCR1HPF390MB06□□
	56	29	3,300	12	560	8x8	PCR1HPF560MB08□□
	68	29	3,300	12	680	8x8	PCR1HPF680MB08□□
	82	25	3,800	12	820	8x11.5	PCR1HPF820MBAB□□
	100	25	3,800	12	1,000	8x11.5	PCR1HPF101MBAB□□
	100	20	4,300	12	1,000	10x12.5	PCR1HPF101MCAC□□
	120	20	4,300	12	1,200	10x12.5	PCR1HPF121MCAC□□
	150	20	4,300	12	1,500	10x12.5	PCR1HPF151MCAC□□
	10	50	1,950	12	126	6.3x5	PCR1JPF100MF05□□
	12	50	1,950	12	151	6.3x5	PCR1JPF120MF05□□
22	45	2,350	12	277	6.3x8	PCR1JPF220MF08□□	
22	45	2,350	12	277	8x6	PCR1JPF220MB06□□	
27	45	2,350	12	340	8x6	PCR1JPF270MB06□□	
33	30	3,200	12	416	8x8	PCR1JPF330MB08□□	
39	30	3,200	12	491	8x8	PCR1JPF390MB08□□	
47	26	3,600	12	592	8x11.5	PCR1JPF470MBAB□□	
56	26	3,600	12	706	8x11.5	PCR1JPF560MBAB□□	
56	22	4,100	12	706	10x12.5	PCR1JPF560MCAC□□	
68	22	4,100	12	857	10x12.5	PCR1JPF680MCAC□□	
82	22	4,100	12	1,033	10x12.5	PCR1JPF820MCAC□□	
100	22	4,100	12	1,260	10x12.5	PCR1JPF101MCAC□□	
22	36	2,900	12	352	8x8	PCR1KPF220MB08□□	
80 1K	27	36	2,900	12	432	8x8	PCR1KPF270MB08□□
	33	32	3,200	12	528	8x11.5	PCR1KPF330MBAB□□
	39	32	3,200	12	624	8x11.5	PCR1KPF390MBAB□□
	47	28	3,600	12	752	10x12.5	PCR1KPF470MCAC□□
	56	28	3,600	12	896	10x12.5	PCR1KPF560MCAC□□
	12	36	3,000	12	240	8x11.5	PCR2APF120MBAB□□
2A 100	15	36	3,000	12	300	8x11.5	PCR2APF150MBAB□□
	22	32	3,300	12	440	10x12.5	PCR2APF220MCAC□□
	27	32	3,300	12	540	10x12.5	PCR2APF270MCAC□□
2B 125	10	45	2,700	12	250	8x11.5	PCR2BPF100MBAB□□
	12	45	2,700	12	300	8x11.5	PCR2BPF120MBAB□□
	18	40	3,000	12	450	10x12.5	PCR2BPF180MCAC□□
	22	40	3,000	12	550	10x12.5	PCR2BPF220MCAC□□
2C 160	8.2	70	2,100	12	262	8x11.5	PCR2CPF8R2MBAB□□
	10	60	2,400	12	320	10x12.5	PCR2CPF100MCAC□□
	12	60	2,400	12	384	10x12.5	PCR2CPF120MCAC□□
2D 200	4.7	120	1,600	12	188	8x11.5	PCR2DPF4R7MBAB□□
	8.2	100	1,850	12	328	10x12.5	PCR2DPF8R2MCAC□□
	10	100	1,850	12	400	10x12.5	PCR2DPF100MCAC□□

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