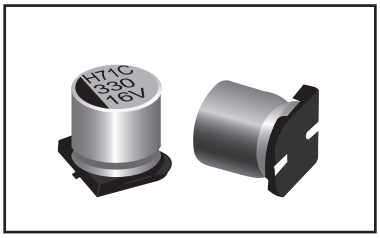
HVF SERIES

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

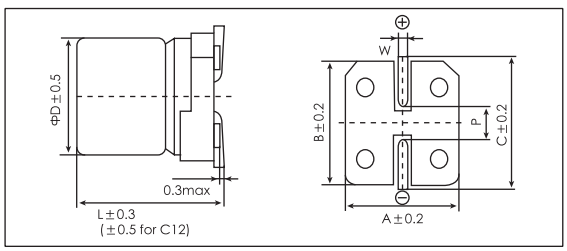
HVF
↑ High voltage, Long life
HVC



Items	Characteristics
Operating Temperature Range (℃)	-55 ~ +105
Voltage Range (V)	16 ~ 200
Capacitance Range (μF) (20℃, 120Hz)	4.7 ~ 1200
Capacitance Tolerance (20℃, 120Hz)	± 20%
Surge Voltage	$U_R \times 1.15$
Leakage Current (μA) ※1	Please see the attached ratings list (20℃, 2min)
Dissipation Factor (20℃, 120Hz)	Please see the attached ratings list
Equivalent Series Resistance (20℃, 100kHz)	Please see the attached ratings list
Temperature Characteristics (Max Impedance Ratio at 100kHz)	$Z_{+105℃} / Z_{+20℃} \leqslant 1.25$ $Z_{-55℃} / Z_{+20℃} \leqslant 1.25$
Endurance	**3000h, Rated voltage applied at 105℃** 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℃, 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℃×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℃.

Dimensions mm



(unit:mm)

Size Code	ΦD±0.5	L	A±0.2	B±0.2	C±0.2	W	P±0.2
F60	6.3	5.7	6.6	6.6	7.3	0.5 ~ 0.8	2.0
B70	8	6.7	8.3	8.3	9.0	0.5 ~ 0.8	3.1
B12	8	12.2	8.3	8.3	9.0	0.7 ~ 1.1	3.1
C12	10	12.2	10.3	10.3	11.0	0.7 ~ 1.1	4.6

Size List

Cap.(μF) \ U_R[S.V] (V)	16 [18]	20 [23]	25 [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														B12
8.2													B12	C12
10									F60			B12	C12	C12
12									F60		B12	B12	C12	
15											B12			
18												C12		
22								F60	B70		C12	C12		
27									B70		C12			
33							F60	B70		B12				
39							F60.B70	B70		B12				
47						F60			B12	C12				
56						F60			B12.C12	C12				
68					F60				C12					
82				F60				B12	C12					
100			F60			B70		B12.C12	C12					
120		F60	F60		B70		B12	C12						
150	F60	B70		B70				C12						
180	F60		B70			B70.B12								
220		B70	B70		B12	B12	C12							
270	B70	B70		B12	B12		C12							
330	B70		B12	B12		C12	C12							
390		B12	B12		C12	C12								
470	B12	B12	B12.C12	C12	C12									
560	B12	B12.C12	C12	C12										
680	B12	C12	C12											
820		C12												
1000	C12													
1200	C12													

POLYMER

Ratings for **HVF** Series

U_R (Surge Voltage) Code	Rated Capacitance 20℃, 120Hz	Max ESR 20℃, 100kHz	Rated Ripple Current 105℃, 100kHz	Dissipation Factor 20℃, 120Hz	Leakage Current 20℃, 2min	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mArms)	(%)	(μA)	(mm)	-
16 1C	150	25	2800	12	480	6.3×5.7	PCV1CVF151MF60□□
	180	25	2800	12	576	6.3×5.7	PCV1CVF181MF60□□
	270	22	3300	12	864	8×6.7	PCV1CVF271MB70□□
	330	22	3300	12	1056	8×6.7	PCV1CVF331MB70□□
	470	14	4950	12	1504	8×12.2	PCV1CVF471MB12□□
	560	14	4950	12	1792	8×12.2	PCV1CVF561MB12□□
	680	14	4950	12	2176	8×12.2	PCV1CVF681MB12□□
	1000	12	5400	12	3200	10×12.2	PCV1CVF102MC12□□
	1200	12	5400	12	3840	10×12.2	PCV1CVF122MC12□□
20 1D	120	28	2650	12	480	6.3×5.7	PCV1DVF121MF60□□
	150	28	2650	12	600	8×6.7	PCV1DVF151MB70□□
	220	24	3200	12	880	8×6.7	PCV1DVF221MB70□□
	270	24	3200	12	1080	8×6.7	PCV1DVF271MB70□□
	390	14	4950	12	1560	8×12.2	PCV1DVF391MB12□□
	470	14	4950	12	1880	8×12.2	PCV1DVF471MB12□□
	560	14	4950	12	2240	8×12.2	PCV1DVF561MB12□□
	560	12	5400	12	2240	10×12.2	PCV1DVF561MC12□□
	680	12	5400	12	2720	10×12.2	PCV1DVF681MC12□□
	820	12	5400	12	3280	10×12.2	PCV1DVF821MC12□□
25 1E	100	30	2550	12	500	6.3×5.7	PCV1EVF101MF60□□
	120	30	2550	12	600	6.3×5.7	PCV1EVF121MF60□□
	180	24	3200	12	900	8×6.7	PCV1EVF181MB70□□
	220	24	3200	12	1100	8×6.7	PCV1EVF221MB70□□
	330	16	4650	12	1650	8×12.2	PCV1EVF331MB12□□
	390	16	4650	12	1950	8×12.2	PCV1EVF391MB12□□
	470	16	4650	12	2350	8×12.2	PCV1EVF471MB12□□
	470	14	5000	12	2350	10×12.2	PCV1EVF471MC12□□
	560	14	5000	12	2800	10×12.2	PCV1EVF561MC12□□
	680	14	5000	12	3400	10×12.2	PCV1EVF681MC12□□
28 1L	82	33	2450	12	459	6.3×5.7	PCV1LVF820MF60□□
	150	28	2950	12	840	8×6.7	PCV1LVF151MB70□□
	270	18	4350	12	1512	8×12.2	PCV1LVF271MB12□□
	330	18	4350	12	1848	8×12.2	PCV1LVF331MB12□□
	470	16	4650	12	2632	10×12.2	PCV1LVF471MC12□□
	560	16	4650	12	3136	10×12.2	PCV1LVF561MC12□□
32 1F	68	35	2350	12	435	6.3×5.7	PCV1FVF680MF60□□
	120	30	2800	12	768	8×6.7	PCV1FVF121MB70□□
	220	20	4000	12	1408	8×12.2	PCV1FVF221MB12□□
	270	20	4000	12	1728	8×12.2	PCV1FVF271MB12□□
	390	18	4400	12	2496	10×12.2	PCV1FVF391MC12□□
	470	18	4400	12	3008	10×12.2	PCV1FVF471MC12□□
35 1V	47	35	2350	12	329	6.3×5.7	PCV1VVF470MF60□□
	56	35	2350	12	392	6.3×5.7	PCV1VVF560MF60□□
	100	30	2800	12	700	8×6.7	PCV1VVF101MB70□□
	180	30	2800	12	849	8×6.7	PCV1VVF181MB70□□
	180	20	4000	12	1260	8×12.2	PCV1VVF181MB12□□
	220	20	4000	12	1540	8×12.2	PCV1VVF221MB12□□
	330	18	4400	12	2310	10×12.2	PCV1VVF331MC12□□
	390	18	4400	12	2730	10×12.2	PCV1VVF391MC12□□

U_R (Surge Voltage) Code	Rated Capacitance 20℃, 120Hz	Max ESR 20℃, 100kHz	Rated Ripple Current 105℃, 100kHz	Dissipation Factor 20℃, 120Hz	Leakage Current 20℃, 2min	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mArms)	(%)	(μA)	(mm)	-
40 1G	33	40	2200	12	264	6.3×5.7	PCV1GVF330MF60□□
	39	37	2300	12	312	6.3×5.7	PCV1GVF390MF60□□
	39	32	2700	12	656	8×6.7	PCV1GVF390MB70□□
	82	32	2700	12	656	8×6.7	PCV1GVF820MB70□□
	150	21	3900	12	1200	8×12.2	PCV1GVF151MB12□□
	220	18	4400	12	1760	10×12.2	PCV1GVF221MC12□□
	270	18	4400	12	2160	10×12.2	PCV1GVF271MC12□□
	330	18	4400	12	2640	10×12.2	PCV1GVF331MC12□□
50 1H	22	40	2200	12	220	6.3×5.7	PCV1HVF220MF60□□
	33	35	2600	12	330	8×6.7	PCV1HVF330MB70□□
	39	35	2600	12	390	8×6.7	PCV1HVF390MB70□□
	82	25	3800	12	820	8×12.2	PCV1HVF820MB12□□
	100	25	3800	12	1000	8×12.2	PCV1HVF101MB12□□
	100	20	4300	12	1000	10×12.2	PCV1HVF101MC12□□
	120	20	4300	12	1200	10×12.2	PCV1HVF121MC12□□
	150	20	4300	12	1500	10×12.2	PCV1HVF151MC12□□
63 1J	10	50	1950	12	126	6.3×5.7	PCV1JVF100MF60□□
	12	50	1950	12	151	6.3×5.7	PCV1JVF120MF60□□
	22	45	2350	12	277	8×6.7	PCV1JVF220MB70□□
	27	45	2350	12	340	8×6.7	PCV1JVF270MB70□□
	47	26	3600	12	592	8×12.2	PCV1JVF470MB12□□
	56	26	3600	12	706	8×12.2	PCV1JVF560MB12□□
	56	22	4100	12	706	10×12.2	PCV1JVF560MC12□□
	68	22	4100	12	857	10×12.2	PCV1JVF680MC12□□
	82	22	4100	12	1033	10×12.2	PCV1JVF820MC12□□
	100	22	4100	12	1260	10×12.2	PCV1JVF101MC12□□
80 1K	33	32	3200	12	528	8×12.2	PCV1KVF330MB12□□
	39	32	3200	12	624	8×12.2	PCV1KVF390MB12□□
	47	28	3600	12	752	10×12.2	PCV1KVF470MC12□□
	56	28	3600	12	896	10×12.2	PCV1KVF560MC12□□
100 2A	12	36	3000	12	240	8×12.2	PCV2AVF120MB12□□
	15	36	3000	12	300	8×12.2	PCV2AVF150MB12□□
	22	32	3300	12	440	10×12.2	PCV2AVF220MC12□□
	27	32	3300	12	540	10×12.2	PCV2AVF270MC12□□
125 2B	10	45	2700	12	250	8×12.2	PCV2BVF100MB12□□
	12	45	2700	12	300	8×12.2	PCV2BVF120MB12□□
	18	40	3000	12	450	10×12.2	PCV2BVF180MC12□□
	22	40	3000	12	550	10×12.2	PCV2BVF220MC12□□
160 2C	8.2	70	2100	12	262	8×12.2	PCV2CVF8R2MB12□□
	10	60	2400	12	320	10×12.2	PCV2CVF100MC12□□
	12	60	2400	12	384	10×12.2	PCV2CVF120MC12□□
200 2D	4.7	120	1600	12	188	8×12.2	PCV2DVF4R7MB12□□
	8.2	100	1850	12	328	10×12.2	PCV2DVF8R2MC12□□
	10	100	1850	12	400	10×12.2	PCV2DVF100MC12□□

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