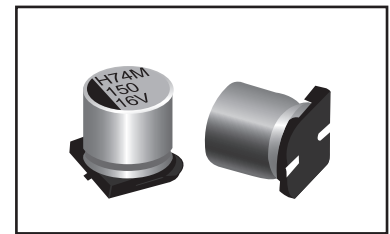
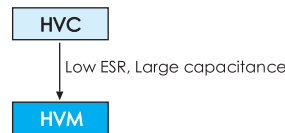


- Chip Type, Low ESR, Large Capacitance 105°C, 2000 hours
- Ultra Low ESR, high ripple current capability
- Applications: DC/DC Converter, Switching Power Supply, Back up Power Supplies for CPU etc.
- RoHS Compliant



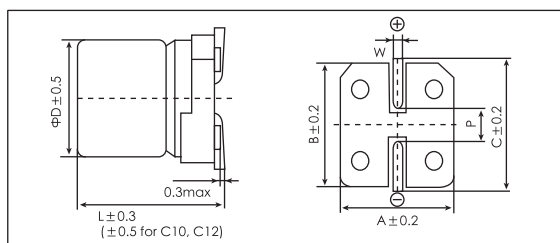
Items	Characteristics
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	2.5 ~ 16
Capacitance Range (μF) (20°C, 120Hz)	68 ~ 2700
Capacitance Tolerance (20°C, 120Hz)	± 20%
Surge Voltage	Rated Voltage(V) x 1.15
Leakage Current (μA) ※1	Please see attached ratings list (20°C, 2min)
Dissipation Factor (20°C, 120Hz)	Please see attached ratings list
Equivalent Series Resistance (20°C, 100kHz)	Please see 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	2000h, 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	Reflow method (260°C x 5s) Capacitance change: within ± 10% of the initial measured value Dissipation Factor (Tan δ): ≤ 130% of initial specified value ESR: ≤ 130% of 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

Size list



(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
F80	6.3	7.7	6.6	6.6	7.3	0.5~0.8	2.0
F10	6.3	10	6.6	6.6	7.3	0.7~1.1	2.0
B70	8	6.7	8.3	8.3	9.0	0.5~0.8	3.1
B80	8	7.7	8.3	8.3	9.0	0.7~1.1	3.1
B10	8	10	8.3	8.3	9.0	0.7~1.1	3.1
B12	8	12.2	8.3	8.3	9.0	0.7~1.1	3.1
C80	10	8	10.3	10.3	11.0	0.7~1.1	4.6
C10	10	10	10.3	10.3	11.0	0.7~1.1	4.6
C12	10	12.2	10.3	10.3	11.0	0.7~1.1	4.6

Cap.(μF)	U _r [S.V] (V)	2.5 [2.9]	4 [4.6]	6.3 [7.2]	10 [12]	16 [18]
56						F60
68						F60
82						F80
100						F60.F80.B70
120					F60	B70
150					F60.F80	B70.B80
180					F60	B10
220				F60	F60.B70	B10.C80
270			F60	F60.F80	B70	B12
330		F60	F60	F60.F80.F10.B70	B70.B80	B12.C10
390		F60	F60.F80	B70	B10	
470		F60.F80	B70	B70.B80	C80	C12
560		F60.F80.B70	B70.B12	B70		
680		B70	B80	B70.B10	C10	
820		B80.B12		B10.B12.C80		C12
1000		B80	B10.C80	B12		C12
1200		C80	B12.C10	C10		
1500		B10.B12	B12.C10	C10.C12		
1800			C10.C12			
2200		C10				
2700		C12				

Ratings for HVM 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)	-
2.5 OE	330	14	3160	12	165.0	6.3×5.7	PCV0EVM331MF60□□
	390	14	3160	12	195.0	6.3×5.7	PCV0EVM391MF60□□
	470	13	3600	12	235.0	6.3×5.7	PCV0EVM471MF60□□
	560	13	3600	12	280.0	6.3×5.7	PCV0EVM561MF60□□
	470	13	3600	12	235.0	6.3×7.7	PCV0EVM471MF80□□
	560	13	3600	12	280.0	6.3×7.7	PCV0EVM561MF80□□
	560	13	4100	12	280.0	8×6.7	PCV0EVM561MB70□□
	680	13	4100	12	340.0	8×6.7	PCV0EVM681MB70□□
	820	12	4260	12	410.0	8×7.7	PCV0EVM821MB80□□
	1000	12	4260	12	500.0	8×7.7	PCV0EVM102MB80□□
	1500	10	5220	12	750.0	8×10	PCV0EVM152MB10□□
	820	9	5400	12	410.0	8×12.2	PCV0EVM821MB12□□
	1500	9	5400	12	750.0	8×12.2	PCV0EVM152MB12□□
	1200	13	4450	12	600.0	10×8	PCV0EVM122MC80□□
	2200	10	5500	12	1100.0	10×10	PCV0EVM222MC10□□
2700	9	5600	12	1350.0	10×12.2	PCV0EVM272MC12□□	
4 OG	270	15	3160	12	216.0	6.3×5.7	PCV0GVM271MF60□□
	330	14	3160	12	264.0	6.3×5.7	PCV0GVM331MF60□□
	390	14	3160	12	312.0	6.3×5.7	PCV0GVM391MF60□□
	390	14	3470	12	312.0	6.3×7.7	PCV0GVM391MF80□□
	470	14	3950	12	376.0	8×6.7	PCV0GVM471MB70□□
	560	14	3950	12	448.0	8×6.7	PCV0GVM561MB70□□
	680	13	3950	12	544.0	8×7.7	PCV0GVM681MB80□□
	1000	10	5220	12	800.0	8×10	PCV0GVM102MB10□□
	560	9	5400	12	448.0	8×12.2	PCV0GVM561MB12□□
	1200	9	5400	12	960.0	8×12.2	PCV0GVM122MB12□□
	1500	9	5400	12	1200.0	8×12.2	PCV0GVM152MB12□□
	1000	14	4300	12	800.0	10×8	PCV0GVM102MC80□□
	1200	10	5500	12	960.0	10×10	PCV0GVM122MC10□□
	1500	10	5500	12	1200.0	10×10	PCV0GVM152MC10□□
	1800	10	5500	12	1440.0	10×10	PCV0GVM182MC10□□
1800	9	5600	12	1440.0	10×12.2	PCV0GVM182MC12□□	
6.3 OJ	220	15	3160	12	277.2	6.3×5.7	PCV0JVM221MF60□□
	270	14	3160	12	340.2	6.3×5.7	PCV0JVM271MF60□□
	330	14	3390	12	415.8	6.3×5.7	PCV0JVM331MF60□□
	270	14	3470	12	340.2	6.3×7.7	PCV0JVM271MF80□□
	330	14	3470	12	415.8	6.3×7.7	PCV0JVM331MF80□□
	330	14	3950	12	415.8	6.3×10	PCV0JVM331MF10□□
	330	14	3950	12	415.8	8×6.7	PCV0JVM331MB70□□
	390	14	3950	12	491.4	8×6.7	PCV0JVM391MB70□□
	470	14	3950	12	592.2	8×6.7	PCV0JVM471MB70□□
	560	14	3950	12	705.6	8×6.7	PCV0JVM561MB70□□
	680	14	3950	12	856.8	8×6.7	PCV0JVM681MB70□□
	470	13	3950	12	592.2	8×7.7	PCV0JVM471MB80□□
	680	12	4770	12	856.8	8×10	PCV0JVM681MB10□□
	820	12	4770	12	1033.2	8×10	PCV0JVM821MB10□□
	820	10	5150	12	1033.2	8×12.2	PCV0JVM821MB12□□
	1000	10	5150	12	1260.0	8×12.2	PCV0JVM102MB12□□
	820	14	4300	12	1033.2	10×8	PCV0JVM821MC80□□
	1200	12	5025	12	1512.0	10×10	PCV0JVM122MC10□□
	1500	12	5025	12	1890.0	10×10	PCV0JVM152MC10□□
	1500	10	5500	12	1890.0	10×12.2	PCV0JVM152MC12□□

Ratings for HVM Series

U _g 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)	-
10 1A	120	18	2900	12	240.0	6.3×5.7	PCV1AVM121MF60□□
	150	18	2900	12	300.0	6.3×5.7	PCV1AVM151MF60□□
	180	18	2900	12	360.0	6.3×5.7	PCV1AVM181MF60□□
	220	18	2900	12	440.0	6.3×5.7	PCV1AVM221MF60□□
	150	21	2880	12	300.0	6.3×7.7	PCV1AVM151MF80□□
	220	21	3220	12	440.0	8×6.7	PCV1AVM221MB70□□
	270	21	3220	12	540.0	8×6.7	PCV1AVM271MB70□□
	330	21	3220	12	660.0	8×6.7	PCV1AVM331MB70□□
	330	19	3390	12	660.0	8×7.7	PCV1AVM331MB80□□
	390	17	4000	12	780.0	8×10	PCV1AVM391MB10□□
	470	19	3800	12	940.0	10×8	PCV1AVM471MC80□□
	680	13	4820	12	1360.0	10×10	PCV1AVM681MC10□□
16 1C	56	25	2440	12	179.2	6.3×5.7	PCV1CVM560MF60□□
	68	25	2440	12	217.6	6.3×5.7	PCV1CVM680MF60□□
	100	24	2490	12	320.0	6.3×5.7	PCV1CVM101MF60□□
	82	24	2700	12	262.4	6.3×7.7	PCV1CVM820MF80□□
	100	24	2700	12	320.0	6.3×7.7	PCV1CVM101MF80□□
	100	24	3010	12	320.0	8×6.7	PCV1CVM101MB70□□
	120	24	3010	12	384.0	8×6.7	PCV1CVM121MB70□□
	150	22	3220	12	480.0	8×6.7	PCV1CVM151MB70□□
	180	22	3220	12	576.9	8×6.7	PCV1CVM151MB70□□
	220	22	3220	12	704.0	8×6.7	PCV1CVM151MB70□□
	150	22	3150	12	480.0	8×7.7	PCV1CVM151MB80□□
	180	18	3890	12	576.0	8×10	PCV1CVM181MB10□□
	220	18	3890	12	704.0	8×10	PCV1CVM221MB10□□
	270	16	4070	12	864.0	8×12.2	PCV1CVM271MB12□□
	330	16	4070	12	1056.0	8×12.2	PCV1CVM331MB12□□
	220	22	3450	12	704.0	10×8	PCV1CVM221MC80□□
	330	16	4350	12	1056.0	10×10	PCV1CVM331MC10□□
	470	14	5050	12	1504.0	10×12.2	PCV1CVM471MC12□□
820	14	5050	12	2624.0	10×12.2	PCV1CVM821MC12□□	
1000	14	5050	12	3200.0	10×12.2	PCV1CVM102MC12□□	

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