

SVPC Series

Large capacitance

Super low ESR

The SVPC series capacitor has larger capacitance than SVPA series.

Adopt this series to reduce the size of equipment and circuits. This product can support lead free-reflow. (※2).



Specifications

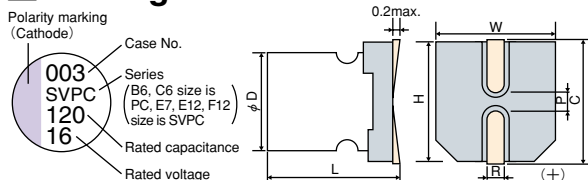
Items	Conditions	Characteristics		
Category temperature range	—	-55°C to +105°C		
Tolerance on rated capacitance	120Hz	M: ±20%		
Tangent of loss angle	120Hz	Less than or equal to the value of Table4		
Leakage current ※1	After 2 minutes	Less than or equal to the value of Table4		
ESR	100KHz	Less than or equal to the value of Table4		
Characteristics of impedance ratio at high temp. and low temp.	Based the value at 100KHz, +20°C	-55°C	Z / Z 20°C	0.75 to 1.25
		+105°C	Z / Z 20°C	0.75 to 1.25
Endurance	105°C, 2,000h, Rated voltage applied	ΔC/C	Within ±20%	
		tanδ	1.5 times or less than an initial standard	
		ESR	1.5 times or less than an initial standard	
		Leakage current	Below an initial standard	
Damp heat (Steady state)	60°C, 90 to 95%RH, 1,000h, No-applied voltage	ΔC/C	Within ±20%	
		tanδ	1.5 times or less than an initial standard	
		ESR	1.5 times or less than an initial standard	
		Leakage current	Below an initial standard (after voltage processing)	
Resistance to soldering heat ※2	VPS (230°C X 75s)	ΔC/C	Within ±10% (±15% for 2.5V)	
		tanδ	1.3 times or less than an initial standard	
		ESR	1.3 times or less than an initial standard	
		Leakage current	Below an initial standard (after voltage processing)	

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

※2 Refer to Page 14 for reflow soldering conditions.

(unit : mm)

Marking and dimensions



Size Code	φD±0.5	L ^{+0.1} _{-0.4}	W±0.2	H±0.2	C±0.2	R	P±0.2
B6	5.0	5.9	5.3	5.3	6.0	0.6 to 0.8	1.4
C6	6.3	5.9	6.6	6.6	7.3	0.6 to 0.8	2.1
E7	8.0	6.9	8.3	8.3	9.0	0.6 to 0.8	3.2
E12	8.0	11.9	8.3	8.3	9.0	0.8 to 1.1	3.2
F12	10.0	12.6	10.3	10.3	11.0	0.8 to 1.1	4.6

Size List

RV : Rated voltage (SV) : Surge voltage (Room temperature)

μF	RV (SV)	2.5 (3.3)	4 (5.2)	6.3 (8.2)	10.0 (12)	16.0 (18.4)
39					B6	B6
68					B6	C6
100				B6	C6	C6
120				B6	C6	E7
150			B6			E7
180	B6					
220				C6		
270					E7	E12
330			C6	C6		
390	C6			E7		
560	C6		E7, E12			
680	E7					
820	E12			E12		
1200			E12			
1500	E12		E12			
2700	F12					

※For the minimum packing quantity, please refer to page 57.

Table4 SVPC Series Characteristics List

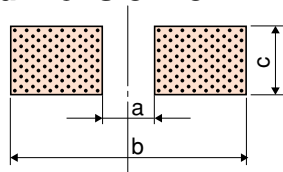
Size Code	Part Number	Rated voltage (V)	Rated capacitance (μF)	ESR (mΩ) (max.)		Rated ripple current 100kHz (mA _{rms}) at 105°C	Tangent of loss angle (max.)	Leakage current (μA) (max.)※1
				100kHz	300kHz ※2			
B6	16SVPC39M	16	39	35	30	1820	0.12	300
	16SVPC39MV	16	39	27	23	2350	0.12	300
	10SVPC68M	10	68	30	26	1970	0.12	300
	10SVPC68MV	10	68	23	20	2540	0.12	300
	6SVPC100M	6.3	100	30	26	1970	0.12	300
	6SVPC100MY	6.3	100	25	21	2150	0.12	300
	6SVPC120MV	6.3	120	21	18	2660	0.12	300
	4SVPC150M	4	150	30	26	1970	0.12	300
	4SVPC150MY	4	150	23	20	2240	0.12	300
	4SVPC150MV	4	150	20	17	2730	0.12	300
	2R5SVPC180M	2.5	180	30	26	1970	0.12	300
	2R5SVPC180MY	2.5	180	24	20	2200	0.12	300
2R5SVPC180MV	2.5	180	19	16	2800	0.12	300	
C6	16SVPC68M	16	68	30	26	2200	0.12	300
	16SVPC68MV	16	68	25	22	2440	0.12	300
	16SVPC100M	16	100	24	23	2490	0.12	300
	10SVPC120M	10	120	27	23	2320	0.12	300
	10SVPC120MV	10	120	22	19	2600	0.12	300
	6SVPC220M	6.3	220	27	23	2320	0.12	300
	6SVPC220MV	6.3	220	15	13	3160	0.12	300
	6SVPC330M	6.3	330	17	15	3390	0.12	415
	4SVPC330M	4	330	27	23	2320	0.12	300
	4SVPC330MY	4	330	21	18	2630	0.12	300
	4SVPC330MV	4	330	15	13	3160	0.12	300
	2R5SVPC390M	2.5	390	25	22	2410	0.12	300
	2R5SVPC390MV	2.5	390	15	13	3160	0.12	300
	2R5SVPC560M	2.5	560	16	14	3500	0.12	300
	E7	16SVPC120M	16	120	27	23	2900	0.12
16SVPC150M		16	150	22	21	3220	0.12	500
10SVPC270M		10	270	22	19	3220	0.12	500
6SVPC390M		6.3	390	22	19	3220	0.12	491
4SVPC560M		4	560	22	19	3220	0.12	500
2R5SVPC680M		2.5	680	20	17	3370	0.12	500
E12	16SVPC270M	16	270	16	14	4070	0.15	864
	6SVPC820M	6.3	820	12	10	4700	0.15	1033
	4SVPC560MX	4	560	9	8	5380	0.15	500
	4SVPC1200M	4	1200	12	10	4700	0.15	960
	4SVPC1500M	4	1500	12	10	4700	0.15	1200
	2R5SVPC820M	2.5	820	9	8	5380	0.15	500
	2R5SVPC1500M	2.5	1500	10	9	5150	0.15	750
F12	2R5SVPC2700M	2.5	2700	12	10	5070	0.15	1350

※1 After 2 minutes

※2 The ESR value in 300kHz is a reference one.

Recommended land pattern dimension of PWB

(unit : mm)



Size Code	a	b	c
B6	1.4	7.4	1.6
C6	2.1	9.1	1.6
E7	2.8	11.1	1.9
E12	2.8	11.1	1.9
F12	4.3	13.1	1.9

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