

Surface mount type

SVPE Series

RoHS directive/Halogen-free compliant
 Super Low ESR (8mΩ~18mΩ)
 Large capacitance(1,200μF)



Specifications

Items	Condition	Specifications				
		2.0	2.5	6.3	10	16
Rated voltage (V)	—	2.0	2.5	6.3	10	16
Surge voltage (V)	Room temperature	2.6	3.3	8.2	12	18
Category temperature range(°C)	—	-55 to +105				
Capacitance tolerance (%)	120Hz/20°C	M : ±20				
Dissipation Factor (DF)	120Hz/20°C	Please see the attached characteristics list				
Leakage current*1	Rated voltage applied, after 2 minutes	Please see the attached characteristics list				
Equivalent series resistance (ESR)	100kHz/20°C	Please see the attached characteristics list				
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% of the initial value			
		DF	Within 1.5 times of the initial limit			
		ESR	Within 1.5 times of the initial limit			
		LC	Within the initial limit			
Damp heat(Steady state)	60°C, 90 to 95%RH, 1,000h, No-applied voltage	ΔC/C	Within ±20% of the initial value			
		DF	Within 1.5 times of the initial limit			
		ESR	Within 1.5 times of the initial limit			
		LC	Within the initial limit (after voltage processing)			
Resistance to soldering heat*2	VPS (230°C X 75s)	ΔC/C	Within ±10% of the initial value (±15% for 2.5V)			
		DF	Within 1.3 times of the initial limit			
		ESR	Within 1.3 times of the initial limit			
		LC	Within the initial limit (after voltage processing)			

*1 When measured values are questionable, measure after voltage processing mentioned below.

Voltage processing: Apply voltage for 120 minutes at 105°C.

*2 Please refer to page 25 for reflow soldering conditions.

Marking and dimensions

003 PE 390 2.5

Series (B6, C6, C10 size is PE, F12 size is SVPE)

Rated capacitance

Rated voltage

(unit : mm)

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	0.6~0.8	1.4
C6	6.3	5.9	6.6	6.6	7.3	0.6~0.8	2.1
C10	6.3	9.9	6.6	6.6	7.3	0.6~0.8	2.1
F12	10.0	12.6	10.3	10.3	11.0	0.8~1.1	4.6

Size list

RV : Rated voltage

μF	RV	2.0	2.5	6.3	10	16
150				B6		
180				B6		C10
220				B6,C6	C6	
270			B6			
330			B6			
390			B6,C6			
470						F12
1200	C10					

OS-CON Line-up

Guidelines and precautions

Series system diagram

Image of case size

Products list

Packing specifications (SMD type)

Packing specifications (Radial lead type)

Recommended soldering condition

Fundamental structure

Characteristics

Reliability

Selection guide

Technical data

Surface mount type

Radial lead type

Catalog Deletion and EOL series

POSCAP Line-up

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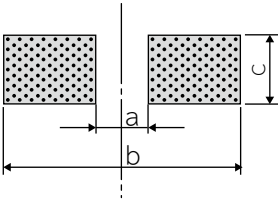
Catalog Deletion and EOL models

SVPE series characteristics list

Size code	Part number	Rated voltage (V)	Rated capacitance (μ F)	ESR($m\Omega$) (max)		Rated ripple current 100kHz (mA _{rms}) at 105°C	DF (% max)	Leakage current (μ A) (max) After 2 minutes
				100kHz/20°C	300kHz/20°C※1			
B6	6SVPE150M	6.3	150	12	10	3520	12	500
	6SVPE180M	6.3	180	15	13	3150	12	500
	6SVPE220MW	6.3	220	15	13	3150	12	500
	2R5SVPE270M	2.5	270	10	9	3860	12	500
	2R5SVPE330M	2.5	330	15	13	3150	12	500
	2R5SVPE330MY	2.5	330	10	9	3860	12	500
	2R5SVPE390MX	2.5	390	10	9	3860	12	700
C6	10SVPE220M	10	220	20	18	2700	12	500
	6SVPE220M	6.3	220	10	9	3900	12	500
	2R5SVPE390M	2.5	390	10	9	3900	12	500
C10	16SVPE180M	16	180	11	10	4460	12	576
	2SVPE1200M	2.0	1200	8	8	5230	12	500
F12	16SVPE470M	16	470	10	9	6100	12	1504

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

Recommended land pattern dimension of PWB



Size code	a	b	c
B6	1.4	7.4	1.6
C6	2.1	9.1	1.6
C10	2.1	9.1	1.6
F12	4.3	13.1	1.9

(unit : mm)

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