

Surface mount type

# SVPB Series

RoHS compliance

Low profile

This is a low profile series based on the SVPA series.  
Suitable for miniaturizing devices and circuits.  
This product can support lead free-reflow.\*2



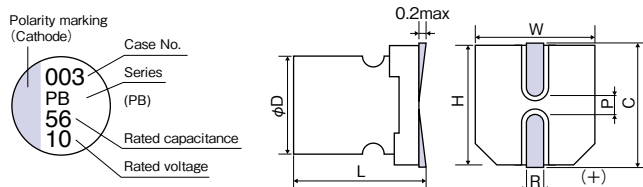
## Specifications

Items	Condition	Specifications					
Rated voltage (V)	—	2.5	4.0	6.3	10	16	20
Surge voltage (V)	Room temperature	3.3	5.2	8.2	12	18	23
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 to 300kHz/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 <sub>20°C</sub>	0.75 to 1.25			
		+105°C	Z/Z <sub>20°C</sub>	0.75 to 1.25			
Endurance	105°C, 1,000h, Rated voltage applied	ΔC/C	Within ±20% of the initial value(±30% for C5 size)				
		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 (±20% for C5 size)				
		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 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 125°C.

\*2 Please refer to page 14 for reflow soldering conditions.

## Marking and dimensions



(unit : mm)

Size code	φD ±0.5	L <sup>+0.1</sup> / <sub>-0.4</sub>	W ±0.2	H ±0.2	C ±0.2	R	P ±0.2
C5	6.3	4.9	6.6	6.6	7.3	0.6 to 0.8	2.1
C55	6.3	5.4	6.6	6.6	7.3	0.6 to 0.8	2.1

## Size list

RV : Rated voltage

μF \ RV	2.5	4.0	6.3	10	16	20
15						C5
22						C55
33					C5	
56				C5		
82			C5			
100		C5				
120	C5					

SVPB

OS-CON

OS-CON Line-up

Guidelines and precautions for use

Series system diagram

Image of case size

Products list

Packing specifications (SMD type)

Packing specifications (Radial lead type)

Fundamental structure

Characteristics

Reliability

Selection guide

Technical data

SVPF

SVPE

SVPS

SVPD

SVPC

**SVPB**

SVPA

SVQP

SVP

SEPF

SEPC

SEQP

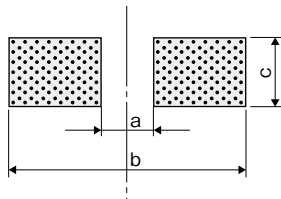
SEP

Conductive polymer type

■ SVPB series characteristics list

Size code	Part number	Rated voltage (V)	Rated capacitance (μF)	ESR (mΩ) (max) 100kHz to 300kHz/20°C	Rated ripple current 100kHz (mA rms) at 105°C	DF (% max)	Leakage current (μA)(max) After 2 minutes
C5	20SVPB15M	20	15	45	2000	12	120
	16SVPB33M	16	33	40	1670	12	211
	10SVPB56M	10	56	40	1670	12	224
	6SVPB82M	6.3	82	40	1670	12	207
	4SVPB100M	4.0	100	40	1670	12	160
	2R5SVPB120M	2.5	120	40	1670	12	120
C55	20SVPB22M	20	22	35	2000	12	88

■ Recommended land pattern dimension of PWB



(unit : mm)

Size code	a	b	c
C5	2.1	9.1	1.6
C55	2.1	9.1	1.6

■ 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