

Surface
mount type

SVPG Series



NEW

HS directive/Halogen-free compliant
Low ESR(8mΩ)
High rated ripple current(5,800mA rms)

OS-CON

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

SXV

SVPG

SVPF

SVPE

SVPS

SVPD

SVPC

SVPB

SVPA

SVQP

SVP

SXE

SEPF

SEPC

SEQP

SEP

Catalog Deletion and
EOL series

POS-CON

POS-CON
Line-up

Guidelines and
precautions

Selection guide

Technical data

Surface mount type

Catalog Deletion and
EOL models

Specifications

Items	Condition	Specifications				
Rated voltage (V)	—	16	20	25		
Surge voltage (V)	Room temperature	18	23	29		
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 +105°C Z/Z _{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, 5,000h, 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			
		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.

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

Marking and dimensions

Polarity marking (Cathode)		Case No. Series	0.2max	W	(unit : mm)							
003	PG 15 25	(PG)	0.2max	W	Size code	φD ±0.5	L ±0.1 -0.4	W ±0.2	H ±0.2	C ±0.2	R	P ±0.2
					B45	5.0	4.4	5.3	5.3	6.0	0.6~0.8	1.4
					C10	6.3	9.9	6.6	6.6	7.3	0.6~0.8	2.1

Size list

RV : Rated voltage

RV	16	20	25
15			B45
33		B45	
47	B45		
270	C10		

Recommended land pattern dimension of PWB

(unit : mm)			
Size code	a	b	c
B45	1.4	7.4	1.6
C10	2.1	9.1	1.6

SVPG 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
B45	25SVPG15M	25	15	30	2800	12	75
	20SVPG33M	20	33	27	3000	12	132
	16SVPG47M	16	47	25	3200	12	150
C10	16SVPG270M	16	270	8	5800	12	864

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