Surface mount type

SVPG Series

NEW

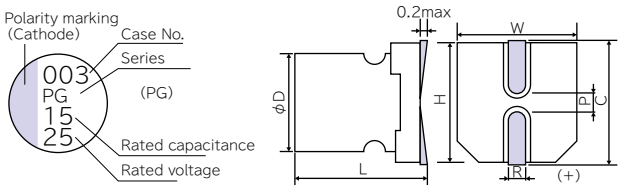
HS directive/Halogen-free compliant
Low ESR(8mΩ)
High rated ripple current(5,800mArms)

Specifications

Items	Condition		Specifications		
Rated voltage (V)	–		16	20	25
Surge voltage (V)	Room temperature		18	23	29
Category temperature range(℃)	–		−55 to +105		
Capacitance tolerance (%)	120Hz/20℃		M : ±20		
Dissipation Factor (DF)	120Hz/20℃		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℃		Please see the attached characteristics list		
Characteristics of impedance ratio at high temp. and low temp.	Based the value at 100kHz, +20℃	−55℃ Z/Z20℃	0.75 to 1.25		
		+105℃ Z/Z20℃	0.75 to 1.25		
Endurance	105℃, 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℃, 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℃ 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



(unit : mm)

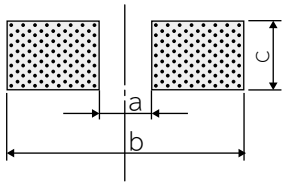
Size code	φD ±0.5	L +0.1 −0.4	W ±0.2	H ±0.2	C ±0.2	R	P ±0.2
B45	5.0	4.4	5.3	5.3	6.0	0.6~0.8	1.4
C10	6.3	9.9	6.6	6.6	7.3	0.6~0.8	2.1

Size list

RV : Rated voltage

μF \ 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℃	Rated ripple current 100kHz (mArms) at 105℃	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