

# SVPD Series

Guaranteed at 125°C

Rated 35V max.

85°C X 85% guaranteed, Rated 35V



The SVQP series guaranteed 125°C high voltage resistance was improved to a rated maximum of 35V. This product is very reliable, guaranteeing 85°C X 85% performance. Suitable for use in smoothing circuits of vehicle-mounted equipment, industrial equipment, etc. This product can support lead free-reflow. ※2

## Specifications

Items		Condition		Specifications			
Rated voltage (V)	(V)	—		10	16	25	35
Surge voltage (V)	(V)	125°C		12	18.4	29	40
Category temperature range (°C)	(°C)	—		-55 to +125			
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			
		+125°C	Z/Z <sub>20°C</sub>	0.75 to 1.25			
Endurance	125°C, 2,000h, Rated voltage applied	ΔC/C		Within ±20%			
		tan δ		2 times or less than an initial standard			
		ESR		2 times or less than an initial standard			
		LC		Below an initial standard			
Damp heat(Steady state)	85°C, 85 to 95%RH, 1,000h, Rated voltage applied	ΔC/C		Within ±20%			
		tan δ		2 times or less than an initial standard			
		ESR		2 times or less than an initial standard			
		LC		Below an initial standard			
Resistance to soldering heat※2	VPS (230°C X 75s)	ΔC/C		Within ±10%			
		tan δ		1.3 times or less than an initial standard			
		ESR		1.3 times or less than an initial standard			
		LC		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 125°C.

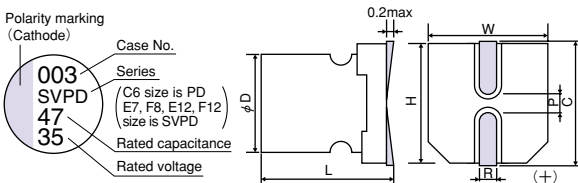
※2 Please refer to page 84 for reflow soldering conditions.

SMD Type

SVPD Series

## 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
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
F8	10.0	7.9	10.3	10.3	11.0	0.6 to 0.8	4.6
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

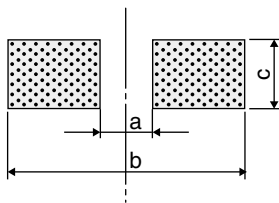
μF	RV	10	16	25	35
8.2					E7
10				C6	
18					F8
22				E7	E12
39				F8	
47				E12	F12
56	C6				
82			E7	F12	

### SVPD Series Characteristics List

Size Code	Part Number	Rated voltage (V)	Rated capacitance ( $\mu$ F)	ESR ( $m\Omega$ ) (max) 100kHz to 300kHz/20°C	Rated ripple current		Tangent of loss angle (% max)	Leakage current ( $\mu$ A)(max) After 2 minutes
					100kHz (mArms) <sup>※1</sup>			
					105°C < Tx ≤ 125°C	Tx ≤ 105°C		
C6	25SVPD10M	25	10	65	474	1500	10	50
	10SVPD56M	10	56	45	538	1700	12	112
E7	35SVPD8R2M	35	8.2	70	400	1300	10	57
	25SVPD22M	25	22	48	580	1835	10	110
	16SVPD82M	16	82	40	670	2120	12	262
F8	35SVPD18M	35	18	60	550	1800	10	126
	25SVPD39M	25	39	45	664	2100	10	195
E12	35SVPD22M	35	22	50	700	2300	12	154
	25SVPD47M	25	47	30	943	2980	12	235
F12	35SVPD47M	35	47	30	1150	3650	12	329
	25SVPD82M	25	82	28	1202	3800	12	410

※1 Tx: Ambient temperature

### Recommended land pattern dimension of PWB



(unit : mm)

Size Code	a	b	c
C6	2.1	9.1	1.6
E7	2.8	11.1	1.9
F8	4.3	13.1	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