

VA series SMD High Voltage



- SMD Type, High voltage
 - Load life of 2000 hours at 105°C
 - Compliant to the RoHS2.0 directive
- 耐高压贴片固态产品, 产品满足 RoHS2.0 指令。

◇ **Specifications**

Items	Characteristics	
Operating Temp. Range	-55°C ~ +105°C	
Capacitance Range	5.6 ~ 820µF	
Capacitance Tolerance	M : ±20%	
Rated Voltage Range	25V ~ 100V DC	
Dissipation Factor	Not to exceed the value specified	
Leakage Current	Not to exceed the value specified (after 2 minutes)	
ESR (100K~300KHz)	Not to exceed the value specified	
Endurance 105°C · 2000h · at rated voltage	Capacitance Change	Within ±20% of the value before test
	Dissipation Factor	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	Leakage current	Not to exceed the value specified
Moisture Resistance Stored at 60°C · RH90 ~ 95% · 1000h	Capacitance Change	Within ±20% of the value before test
	Dissipation Factor	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	Leakage Current	Not to exceed the value specified
Resistance to Soldering Heat After the recommended soldering conditions	Capacitance Change	Within ±5% of the value before test
	Dissipation Factor	Not to exceed the value specified
	ESR	Not to exceed the value specified
	Leakage Current	Not to exceed the value specified (Charging treatment)

※When there is any doubt, measure after charging treatment below.

Charging treatment: at 105 °C, Rated voltage is loaded for 120 minutes continuously.

◇ **Dimensions (Unit:mm)**

ΦD±0.5max.	6.3				8			10	
L±0.3	7.7	9	10	12	9.2	10.5	12.2	10.5	12.7
W±0.2	6.6				8.3			10.3	
H±0.2	6.6				8.3			10.3	
C±0.2	7.2				9.0			11.0	
P±0.2	2.1				3.2			4.6	
R	0.5 ~ 0.8				0.8 ~ 1.1			0.8 ~ 1.1	
T1、T2	0.2Max				0.2Max			0.2Max	

Recommended land pattern

ΦD	6.3	8	10
a	2.1	2.8	4.3
b	3.5	4.2	4.4
c	1.6	1.9	1.9

✧ Capacitance List

W.V (S.V) SIZE	25 (29)	35 (40)	50 (58)	63 (72)	80 (92)	100 (115)
6.3×7.7	100 ~ 180μF	47 ~ 100μF	22 ~ 39μF	15 ~ 27μF	10 ~ 15μF	5.6 ~ 8.2μF
6.3×9	150 ~ 220μF	56 ~ 120μF	27 ~ 47μF	22 ~ 33μF	12 ~ 18μF	8.2 ~ 12μF
6.3×10	180 ~ 270μF	68 ~ 150μF	33 ~ 56μF	27 ~ 39μF	15 ~ 22μF	10 ~ 15μF
6.3×12	220 ~ 390μF	100 ~ 220μF	39 ~ 68μF	33 ~ 56μF	18 ~ 27μF	12 ~ 18μF
8×9.2	180 ~ 390μF	82 ~ 220μF	39 ~ 68μF	27 ~ 47μF	15 ~ 27μF	12 ~ 18μF
8×10.5	220 ~ 470μF	100 ~ 270μF	47 ~ 100μF	33 ~ 68μF	22 ~ 33μF	15 ~ 22μF
8×12.2	270 ~ 560μF	100 ~ 270μF	56 ~ 100μF	39 ~ 68μF	22 ~ 39μF	15 ~ 22μF
10×10.5	270 ~ 560μF	120 ~ 330μF	68 ~ 120μF	47 ~ 100μF	27 ~ 47μF	18 ~ 33μF
10×12.7	390 ~ 820μF	180 ~ 470μF	82 ~ 180μF	68 ~ 120μF	39 ~ 68μF	27 ~ 47μF

✧ Characteristics List

W.V (V)	Capacitance (μF)	L.C. (μA,2min)	tgδ (120Hz,20°C)	ESR (mΩ,100kHz)	Rated Ripple Current(mA,r.m.s)	Size ΦD×L(mm)	Part Number
25	100	125	0.10	20	2800	6.3×7.7	PVA101M025E77TR□□□□
	220	275	0.10	20	3100	6.3×9	PVA221M025E09TR□□□□
	270	300	0.10	20	3200	6.3×10	PVA271M025E10TR□□□□
	330	300	0.10	15	3800	6.3×12	PVA331M025E12TR□□□□
	330	300	0.10	15	3800	8×9.2	PVA331M025F92TR□□□□
	390	300	0.10	15	4200	8×10.5	PVA391M025F1ETR□□□□
	470	300	0.10	15	4500	8×12.2	PVA471M025F1CTR□□□□
	560	300	0.10	15	4800	10×10.5	PVA561M025G1ETR□□□□
35	820	300	0.10	12	5100	10×12.7	PVA821M025G1DTR□□□□
	68	119	0.10	30	2200	6.3×7.7	PVA680M035E77TR□□□□
	100	175	0.10	30	2250	6.3×9	PVA101M035E09TR□□□□
	150	262.5	0.10	30	2350	6.3×10	PVA151M035E10TR□□□□
	220	300	0.10	20	2700	6.3×12	PVA221M035E12TR□□□□
	100	175	0.10	22	2800	8×9.2	PVA101M035F92TR□□□□
	220	300	0.10	20	2900	8×10.5	PVA221M035F1ETR□□□□
	270	300	0.10	20	3000	8×12.2	PVA271M035F1CTR□□□□
50	330	300	0.10	20	3100	10×10.5	PVA331M035G1ETR□□□□
	470	300	0.10	20	3200	10×12.7	PVA471M035G1DTR□□□□
	33	100	0.10	35	2000	6.3×7.7	PVA330M050E77TR□□□□
	47	117.5	0.10	30	2100	6.3×9	PVA470M050E09TR□□□□
	56	140	0.10	30	2300	6.3×10	PVA560M050E10TR□□□□
	68	170	0.10	20	2500	6.3×12	PVA680M050E12TR□□□□
	56	140	0.10	22	2600	8×9.2	PVA560M050F92TR□□□□
	82	205	0.10	20	2700	8×10.5	PVA820M050F1ETR□□□□
63	100	250	0.10	20	2800	8×12.2	PVA101M050F1CTR□□□□
	100	250	0.10	20	2900	10×10.5	PVA101M050G1ETR□□□□
	150	300	0.10	20	3000	10×12.7	PVA151M050G1DTR□□□□
	22	100	0.10	35	2000	6.3×7.7	PVA220M063E77TR□□□□
	33	104	0.10	30	2100	6.3×9	PVA330M063E09TR□□□□
	39	122.8	0.10	30	2300	6.3×10	PVA390M063E10TR□□□□
	56	176.4	0.10	20	2500	6.3×12	PVA560M063E12TR□□□□
	47	148	0.10	22	2600	8×9.2	PVA470M063F92TR□□□□
56	176.4	0.10	20	2700	8×10.5	PVA560M063F1ETR□□□□	

W.V. (V)	Capacitance (μ F)	L.C. (μ A,2min)	tg δ (120Hz,20 $^{\circ}$ C)	ESR (m Ω ,100kHz)	Rated Ripple Current(mA,r.m.s)	Size Φ D \times L(mm)	Part Number
63	68	214.2	0.10	20	2800	8 \times 12.2	PVA680M063F1CTR□□□□
	82	258.3	0.10	20	2900	10 \times 10.5	PVA820M063G1ETR□□□□
	100	300	0.10	20	3000	10 \times 12.7	PVA101M063G1DTR□□□□
80	10	100	0.10	55	2000	6.3 \times 7.7	PVA100M080E77TR□□□□
	12	100	0.10	35	2100	6.3 \times 9	PVA120M080E09TR□□□□
	15	100	0.10	35	2200	6.3 \times 10	PVA150M080E10TR□□□□
	22	100	0.10	22	2300	6.3 \times 12	PVA220M080E12TR□□□□
	22	100	0.10	25	2400	8 \times 9.2	PVA220M080F92TR□□□□
	33	132	0.10	22	2500	8 \times 10.5	PVA330M080F1ETR□□□□
	39	156	0.10	22	2600	8 \times 12.2	PVA390M080F1CTR□□□□
	47	188	0.10	22	2700	10 \times 10.5	PVA470M080G1ETR□□□□
	56	224	0.10	22	2800	10 \times 12.7	PVA560M080G1DTR□□□□
	100	5.6	100	0.10	65	1800	6.3 \times 7.7
10		100	0.10	35	1900	6.3 \times 9	PVA100M100E09TR□□□□
12		100	0.10	35	2000	6.3 \times 10	PVA120M100E10TR□□□□
15		100	0.10	22	2100	6.3 \times 12	PVA150M100E12TR□□□□
15		100	0.10	25	2200	8 \times 9.2	PVA150M100F92TR□□□□
22		110	0.10	22	2300	8 \times 10.5	PVA220M100F1ETR□□□□
22		110	0.10	22	2400	8 \times 12.2	PVA220M100F1CTR□□□□
33		165	0.10	22	2500	10 \times 10.5	PVA330M100G1ETR□□□□
47	235	0.10	22	2600	10 \times 12.7	PVA470M100G1DTR□□□□	

* For the last 4 digits of the part number, please refer to the part number system on page 125.

❖ Frequency Coefficient for Ripple Current

Frequency	120Hz \leq freq.<1KHz	1KHz \leq freq.<10KHz	10KHz \leq freq.<50KHz	50KHz \leq freq.<100KHz	100KHz \leq freq.<300KHz
Coefficient	0.05	0.3	0.7	0.85	1