

VE series Long life to 15000hours

- SMD Type, Low ESR, High ripple current
 - Load life of 15000 hours at 105°C
 - Compliant to the RoHS2.0 directive
- 低 ESR 和超大纹波电流贴片固态产品, 产品满足RoHS2.0 指令。



◇ Specifications

Items	Characteristics	
Operating Temp. Range	-55°C ~ +105°C	
Capacitance Range	39~3300μF	
Capacitance Tolerance	M : ±20%	
Rated Voltage Range	2.5V ~ 25V 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 · 15000h · 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.	5	6.3		8			10		
L±0.3	5.8	5.8	7.7	9	9.2	10.5	12.2	10.5	12.7
W±0.2	5.3	6.6		8.3			10.3		
H±0.2	5.3	6.6		8.3			10.3		
C±0.2	5.9	7.2		9.0			11.0		
P±0.2	1.4	2.1		3.2			4.8		
R	0.5 ~ 0.8	0.5 ~ 0.8		0.8 ~ 1.1			0.8 ~ 1.1		
T1、T2	0.2Max	0.2Max		0.2Max			0.2Max		

Recommended land pattern

ΦD	5	6.3	8	10
a	1.4	2.1	2.8	4.3
b	3.0	3.5	4.2	4.4
c	1.6	1.6	1.9	1.9

✧ Capacitance List

W.V (S.V) SIZE	2.5 (2.8)	4 (4.6)	6.3 (7.2)	10 (11.5)	16 (7.2)	25 (11.5)
5×5.8	180 ~ 390μF	150 ~ 220μF	120 ~ 180μF	82 ~ 120μF	56 ~ 82μF	39 ~ 56μF
6.3×5.8	390 ~ 560μF	330 ~ 470μF	220 ~ 390μF	150 ~ 220μF	120 ~ 180μF	68 ~ 100μF
6.3×7.7	560 ~ 820μF	470 ~ 680μF	330 ~ 560μF	220 ~ 330μF	180 ~ 270μF	100 ~ 150μF
6.3×9	680 ~ 1000μF	560 ~ 820μF	470 ~ 680μF	270 ~ 470μF	220 ~ 330μF	100 ~ 180μF
8×9.2	820 ~ 1500μF	820 ~ 1200μF	560 ~ 1000μF	390 ~ 680μF	270 ~ 560μF	180 ~ 330μF
8×10.5	1200 ~	1000 ~	820 ~ 1200μF	470 ~ 820μF	390 ~ 680μF	220 ~ 390μF
8×12.2	1500 ~	1000 ~	820 ~ 1500μF	560 ~ 1000μF	390 ~ 820μF	270 ~ 470μF
10×10.5	1500 ~	1000 ~	1000 ~	560 ~ 1000μF	470 ~ 820μF	270 ~ 470μF
10×12.7	1800 ~	1500 ~	1200 ~	820 ~ 1500μF	560 ~ 1000μF	390 ~ 680μF

✧ 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
2.5	390	100	0.08	16	3200	5×5.8	PVE391M2R5C58TR□□□□
	560	140	0.08	12	3800	6.3×5.8	PVE561M2R5E58TR□□□□
	820	205	0.08	9	4200	6.3×7.7	PVE821M2R5E77TR□□□□
	1000	250	0.08	7	4900	6.3×9	PVE102M2R5E09TR□□□□
	1200	300	0.08	7	5500	8×9.2	PVE122M2R5F92TR□□□□
	1500	375	0.08	7	5800	8×10.5	PVE152M2R5F1ETR□□□□
	1800	450	0.08	7	6000	8×12.2	PVE182M2R5F1CTR□□□□
	2200	550	0.08	7	6100	10×10.5	PVE222M2R5G1ETR□□□□
4	3300	825	0.08	7	6300	10×12.7	PVE332M2R5G1DTR□□□□
	220	100	0.08	16	3100	5×5.8	PVE221M004C58TR□□□□
	330	132	0.08	12	3700	6.3×5.8	PVE331M004E58TR□□□□
	560	224	0.08	9	4000	6.3×7.7	PVE561M004E77TR□□□□
	680	272	0.08	7	4600	6.3×9	PVE681M004E09TR□□□□
	820	328	0.08	7	5200	8×9.2	PVE821M004F92TR□□□□
	1200	480	0.08	7	5400	8×10.5	PVE122M004F1ETR□□□□
	1500	600	0.08	7	5700	8×12.2	PVE152M004F1CTR□□□□
6.3	1800	720	0.08	7	5800	10×10.5	PVE182M004G1ETR□□□□
	2200	880	0.08	7	6100	10×12.7	PVE222M004G1DTR□□□□
	150	100	0.08	20	2900	5×5.8	PVE151M6R3C58TR□□□□
	330	207.9	0.08	15	3500	6.3×5.8	PVE331M6R3E58TR□□□□
	470	296.1	0.08	12	3900	6.3×7.7	PVE471M6R3E77TR□□□□
	560	352.8	0.08	8	4500	6.3×9	PVE561M6R3E09TR□□□□
	820	516.6	0.08	7	5100	8×9.2	PVE821M6R3F92TR□□□□
	1000	630	0.08	7	5200	8×10.5	PVE102M6R3F1ETR□□□□
10	1200	756	0.08	7	5400	8×12.2	PVE122M6R3F1CTR□□□□
	1500	945	0.08	7	5500	10×10.5	PVE152M6R3G1ETR□□□□
	2200	1000	0.08	7	5900	10×12.7	PVE222M6R3G1DTR□□□□
	100	100	0.08	20	2800	5×5.8	PVE101M010C58TR□□□□
	220	220	0.08	15	3400	6.3×5.8	PVE221M010E58TR□□□□
	330	330	0.08	12	3700	6.3×7.7	PVE331M010E77TR□□□□
	470	470	0.08	8	4400	6.3×9	PVE471M010E09TR□□□□
	560	560	0.08	8	5000	8×9.2	PVE561M010F92TR□□□□
10	680	680	0.08	8	5100	8×10.5	PVE681M010F1ETR□□□□
	820	820	0.08	8	5200	8×12.2	PVE821M010F1CTR□□□□
	1000	1000	0.08	8	5400	10×10.5	PVE102M010G1ETR□□□□



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	
10	1200	1000	0.08	8	5700	10 \times 12.7	PVE122M010G1DTR□□□□	
	16	56	100	0.10	30	1700	5 \times 5.8	PVE560M016C58TR□□□□
		150	240	0.10	25	2400	6.3 \times 5.8	PVE151M016E58TR□□□□
		220	352	0.10	15	2900	6.3 \times 7.7	PVE221M016E77TR□□□□
		270	432	0.10	15	3200	6.3 \times 9	PVE271M016E09TR□□□□
		470	752	0.10	12	3900	8 \times 9.2	PVE471M016F92TR□□□□
		560	896	0.10	12	4100	8 \times 10.5	PVE561M016F1ETR□□□□
		680	1000	0.10	12	4500	8 \times 12.2	PVE681M016F1CTR□□□□
		820	1000	0.10	12	4800	10 \times 10.5	PVE821M016G1ETR□□□□
1000		1000	0.10	10	5100	10 \times 12.7	PVE102M016G1DTR□□□□	
25	39	100	0.10	40	1400	5 \times 5.8	PVE390M025C58TR□□□□	
	82	205	0.10	28	2100	6.3 \times 5.8	PVE820M025E58TR□□□□	
	100	250	0.10	25	2700	6.3 \times 7.7	PVE101M025E77TR□□□□	
	150	375	0.10	20	3000	6.3 \times 9	PVE151M025E09TR□□□□	
	220	550	0.10	15	3600	8 \times 9.2	PVE221M025F92TR□□□□	
	330	825	0.10	15	3900	8 \times 10.5	PVE331M025F1ETR□□□□	
	470	1000	0.10	15	4300	8 \times 12.2	PVE471M025F1CTR□□□□	
	470	1000	0.10	15	4600	10 \times 10.5	PVE471M025G1ETR□□□□	
	560	1000	0.10	12	4900	10 \times 12.7	PVE561M025G1DTR□□□□	

* 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 (C \leq 1000 μ F)	0.05	0.3	0.7	0.85	1
Coefficient (3000 μ F \geq C>1000 μ F)	0.1	0.33	0.85	1	1
Coefficient (C>3000 μ F)	0.12	0.35	1	1	1