

VS series Standard

- SMD Type, Low ESR, High ripple current
 - Load life of 2000 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	150 ~ 3900µF	
Capacitance Tolerance	M : ±20%	
Rated Voltage Range	2.5V ~ 16V 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	2.5 (2.8)	4 (4.6)	6.3 (7.3)	10 (11.5)	16 (18.4)
6.3×7.7	560 ~ 820μF	470 ~ 680μF	330 ~ 560μF	270 ~ 390μF	150 ~ 270μF
6.3×9	680 ~ 1000μF	560 ~ 820μF	470 ~ 680μF	330 ~ 470μF	220 ~ 330μF
6.3×10	820 ~ 1200μF	680 ~ 1000μF	560 ~ 820μF	390 ~ 560μF	270 ~ 390μF
6.3×12	1200 ~ 1800μF	1000 ~ 1500μF	820 ~ 1200μF	560 ~ 820μF	330 ~ 470μF
8×9.2	1000 ~ 1800μF	680 ~ 1200μF	560 ~ 1200μF	470 ~ 820μF	270 ~ 560μF
8×10.5	1200 ~ 2200μF	820 ~ 1500μF	820 ~ 1500μF	560 ~ 1000μF	390 ~ 680μF
8×12.2	1500 ~ 2700μF	1000 ~ 1800μF	1000 ~ 1500μF	680 ~ 1200μF	470 ~ 820μF
10×10.5	1500 ~ 2700μF	1200 ~ 2200μF	1000 ~ 1800μF	680 ~ 1200μF	470 ~ 820μF
10×12.7	2200 ~ 3900μF	1500 ~ 2700μF	1200 ~ 2200μF	1000 ~ 1800μF	560 ~ 1200μF

✧ Characteristics List

W.V (V)	Capacitance (μF)	L.C. (μA,2min)	tgδ (120Hz,20℃)	ESR (mΩ,100kHz)	Rated Ripple Current(mA,r.m.s)	Size ΦD×L(mm)	Part Number
2.5	560	140	0.08	9	4500	6.3×7.7	PVS561M2R5E77TR□□□□
	820	205	0.08	7	5400	6.3×9	PVS821M2R5E09TR□□□□
	1000	250	0.08	7	5600	6.3×10	PVS102M2R5E10TR□□□□
	1500	375	0.08	7	5800	6.3×12	PVS152M2R5E12TR□□□□
	1200	300	0.08	7	5600	8×9.2	PVS122M2R5F92TR□□□□
	1500	375	0.08	7	5800	8×10.5	PVS152M2R5F1ETR□□□□
	2200	550	0.10	7	6100	8×12.2	PVS222M2R5F1CTR□□□□
	2700	675	0.10	7	6100	10×10.5	PVS272M2R5G1ETR□□□□
4	3300	825	0.10	7	6400	10×12.7	PVS332M2R5G1DTR□□□□
	560	224	0.08	10	4300	6.3×7.7	PVS561M004E77TR□□□□
	680	272	0.08	8	5200	6.3×9	PVS681M004E09TR□□□□
	820	328	0.08	8	5400	6.3×10	PVS821M004E10TR□□□□
	1500	600	0.08	8	5600	6.3×12	PVS152M004E12TR□□□□
	1000	400	0.08	8	5400	8×9.2	PVS102M004F92TR□□□□
	1200	480	0.08	8	5600	8×10.5	PVS122M004F1ETR□□□□
	1500	600	0.08	8	5900	8×12.2	PVS152M004F1CTR□□□□
6.3	1500	600	0.08	8	5900	10×10.5	PVS152M004G1ETR□□□□
	2200	880	0.10	8	6100	10×12.7	PVS222M004G1DTR□□□□
	470	296.1	0.08	12	4100	6.3×7.7	PVS471M6R3E77TR□□□□
	560	352.8	0.08	8	4600	6.3×9	PVS561M6R3E09TR□□□□
	680	428.4	0.08	8	4900	6.3×10	PVS681M6R3E10TR□□□□
	820	516.6	0.08	8	5400	6.3×12	PVS821M6R3E12TR□□□□
	1000	630	0.08	8	5300	8×9.2	PVS102M6R3F92TR□□□□
	1200	756	0.08	8	5400	8×10.5	PVS122M6R3F1ETR□□□□
10	1500	945	0.08	8	5500	8×12.2	PVS152M6R3F1CTR□□□□
	1800	1000	0.08	8	5600	10×10.5	PVS182M6R3G1ETR□□□□
	2200	1000	0.10	8	6000	10×12.7	PVS222M6R3G1DTR□□□□
	330	330	0.08	15	3700	6.3×7.7	PVS331M010E77TR□□□□
	470	470	0.08	9	4500	6.3×9	PVS471M010E09TR□□□□
	560	560	0.08	9	4700	6.3×10	PVS561M010E10TR□□□□
	820	820	0.08	8	5200	6.3×12	PVS821M010E12TR□□□□
	680	680	0.08	8	5200	8×9.2	PVS681M010F92TR□□□□
10	820	820	0.08	8	5300	8×10.5	PVS821M010F1ETR□□□□
	1000	1000	0.08	8	5400	8×12.2	PVS102M010F1CTR□□□□

W.V. (V)	Capacitance (μF)	L.C. ($\mu\text{A}, 2\text{min}$)	$\text{tg}\delta$ (120Hz, 20°C)	ESR ($\text{m}\Omega, 100\text{kHz}$)	Rated Ripple Current($\text{mA}, \text{r.m.s}$)	Size $\Phi\text{D}\times\text{L}(\text{mm})$	Part Number
10	1000	1000	0.08	8	5500	10×10.5	PVS102M010G1ETR□□□□
	1500	1000	0.08	8	5900	10×12.7	PVS152M010G1DTR□□□□
16	220	352	0.10	15	3100	6.3×7.7	PVS221M016E77TR□□□□
	270	432	0.10	15	3400	6.3×9	PVS271M016E09TR□□□□
	330	528	0.10	15	3500	6.3×10	PVS331M016E10TR□□□□
	470	752	0.10	12	4100	6.3×12	PVS471M016E12TR□□□□
	470	752	0.10	12	4100	8×9.2	PVS471M016F92TR□□□□
	560	896	0.10	12	4500	8×10.5	PVS561M016F1ETR□□□□
	680	1000	0.10	12	4800	8×12.2	PVS681M016F1CTR□□□□
	820	1000	0.10	12	5100	10×10.5	PVS821M016G1ETR□□□□
	1000	1000	0.10	10	5400	10×12.7	PVS102M016G1DTR□□□□

* 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≤freq.<1KHz	1KHz≤freq.<10KHz	10KHz≤freq.<50KHz	50KHz≤freq.<100KHz	100KHz≤freq.<300KHz
Coefficient ($C\leq 1000\mu\text{F}$)	0.05	0.3	0.7	0.85	1
Coefficient ($3000\mu\text{F}\geq C>1000\mu\text{F}$)	0.1	0.33	0.85	1	1
Coefficient ($C>3000\mu\text{F}$)	0.12	0.35	1	1	1