

VK series Long life to 23000hours



- SMD Type, Low ESR, High ripple current
- Load life of 23000 hours at 105°C
- Compliant to the RoHS2.0 directive

长寿命 23000 小时 (105°C), 低 ESR 和超大纹波电流贴片固态产品, 产品满足 RoHS2.0 指令。

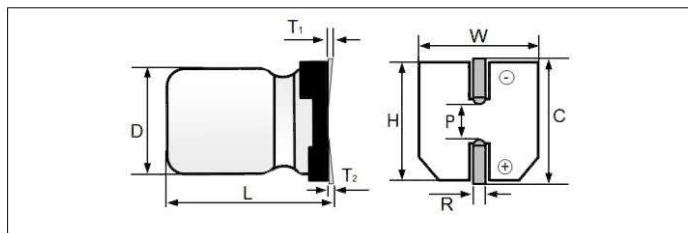
◇ Specifications

Items	Characteristics	
Operating Temp. Range	-55°C ~ +105°C	
Capacitance Range	100 ~ 1000μF	
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 · 23000h · at rated voltage	Capacitance	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 85°C · RH 85% · 1000h	Capacitance	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	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.

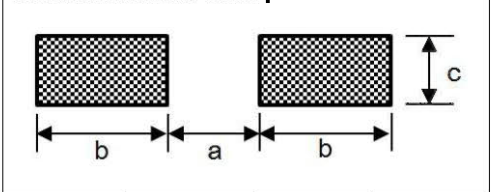
Charging treatment: at 105 °C, Rated voltage is loaded for 120 minutes continuously.

◇ Dimensions (Unit:mm)



ΦD+0.5max.	6.3			8		10	
L±0.3	5.8	7.7	9	9.2	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

SIZE \ W.V (S.V)	2.5 (2.9)	4 (4.6)	6.3 (7.2)	16 (18)	
6.3×5.8	390 ~ 560μF	330 ~ 470μF	220 ~ 330μF	100 ~ 150μF	
6.3×7.7	560 ~ 820μF	470 ~ 680μF	330 ~ 560μF	150 ~ 220μF	
6.3×9	680 ~ 1000μF	560 ~ 820μF	470 ~ 680μF	180 ~ 270μF	
8×9.2				270 ~ 470μF	
8×12.2				330 ~ 680μF	
10×10.5				390 ~ 680μF	
10×12.7				470 ~ 1000μF	

✧ 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	12	3800	6.3×5.8	PVK561M2R5E58TR□□□□
	820	205	0.08	9	4500	6.3×7.7	PVK821M2R5E77TR□□□□
	1000	250	0.08	7	5400	6.3×9	PVK102M2R5E09TR□□□□
4	390	156	0.08	12	3600	6.3×5.8	PVK391M004E58TR□□□□
	560	224	0.08	9	4300	6.3×7.7	PVK561M004E77TR□□□□
	680	272	0.08	7	5200	6.3×9	PVK681M004E09TR□□□□
6.3	330	207.9	0.08	15	3500	6.3×5.8	PVK331M6R3E58TR□□□□
	470	296.1	0.08	12	4100	6.3×7.7	PVK471M6R3E77TR□□□□
	560	352.8	0.08	8	4600	6.3×9	PVK561M6R3E09TR□□□□
16	100	160	0.10	25	2400	6.3×5.8	PVK101M016E58TR□□□□
	220	352	0.10	15	3100	6.3×7.7	PVK221M016E77TR□□□□
	270	432	0.10	15	3400	6.3×9	PVK271M016E09TR□□□□
	330	528	0.10	12	4100	8×9.2	PVK331M016F92TR□□□□
	470	752	0.10	12	4800	8×12.2	PVK471M016F1CTR□□□□
	560	896	0.10	12	5200	10×10.5	PVK561M016G1ETR□□□□
	820	1000	0.10	10	5400	10×12.7	PVK821M016G1DTR□□□□

* 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	0.05	0.3	0.7	0.85	1