

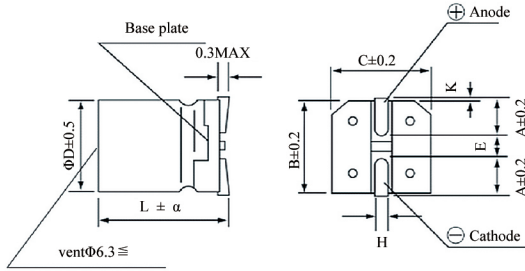
VKL

- ◆ 125°C 2000~5000 Hours
- ◆ Miniature, High Frequency And High Ripple Current
- ◆ Available For High Density And Full-Automatic Mounting
- ◆ High Temperature Reflow Soldering Product
- ◆ RoHS Compliant
- ◆ AEC-Q200 Qualified, Please Consult Us For More Details



■ Specification

Items	Characteristics							
Operation Temperature Range	≤100V.DC -40°C~+125°C ; 160~450V.DC -25°C~+125°C							
Rated Voltage	10~450V.DC							
Capacitance Tolerance	±20% (25±2°C 120Hz)							
Leakage Current(μA)	10~100WV I≤0.01CV or 3μA whichever is greater C:rated capacitance(μF) V:rated voltage(V) 2 minutes reading							
	160~500WV I≤0.02CV+10(μA) C:rated capacitance(μF) V:rated voltage(V) 2 minutes reading							
Dissipation Factor (25±2°C 120Hz)	Rated Voltage(V)	10	16	25	35	50	63	80
	tgδ	0.28	0.24	0.20	0.16	0.14	0.14	0.12
	Rated Voltage(V)	100	160	200	250	400	450	
	tgδ	0.12	0.15	0.15	0.15	0.20	0.20	
For those with rated capacitance larger than 1000μF, when the rated capacitance is increased by 1000μF, then tgδ will be increased by 0.02								
Temperature Characteristics (120Hz)	Rated Voltage(V)	10	16	25	35	50	63	80
	Z(-40°C)/Z(20°C)	6	4	3	3	3	3	3
	Rated Voltage(V)	100	160	200	250	400	450	
	Z(-40°C)/Z(20°C)	3	5	5	5	7	7	
Endurance	After standard test time with applying the rated voltage with the rated ripple current in the oven at 125°C, the following specification shall be satisfied after 16 hours at 25±2°C.							
	Capacitance change	10WV~100WV within±30% of the initial value						
		160WV~450WV within±20% of the initial value						
	Dissipation Factor	10WV~100WV within±300% of the initial value						
		160WV~450WV within±200% of the initial value						
	Leakage current	Not more than the specified value						
Load life(hours)	10 WV ~ 100WV			160WV ~ 450WV				
	Size		Load life	Size		Load life		
	ΦD=5、6.3		2000hrs	ΦD=5、6.3		2000hrs		
	ΦD=8、10		3000hrs	ΦD=8		3000hrs		
ΦD≥12.5		5000hrs	ΦD≥10		5000hrs			
Shelf Life At High Temperature	After leaving capacitors under no load at 105°C for 1000 hours, the following specification shall be satisfied at 25±2°C.							
	Capacitance change	within±20% of the initial value						
	Dissipation Factor	Not more than 200% of the specified value						
	Leakage current	Not more than 200% of the specified value						

Standard Size (Unit: mm)


ΦD	L	B	C	A	H	E	K	α
5	10	5.3	5.3	2.1	0.75±0.10	1.3	0.7MAX	±0.5
5	12	5.3	5.3	2.1	0.75±0.10	1.3	0.7MAX	±0.5
6.3	10	6.6	6.6	2.6	0.75±0.10	1.8	0.7MAX	±0.5
6.3	12	6.6	6.6	2.6	0.75±0.10	1.8	0.7MAX	±0.5
8	10	8.3	8.3	3.4	0.90±0.20	3.1	0.7MAX	±0.5
8	12.5	8.3	8.3	3.4	0.90±0.20	3.1	0.7MAX	±0.5
8	14.5	8.3	8.3	3.4	0.90±0.20	3.1	0.7MAX	±0.5
8	16.5	8.3	8.3	3.4	0.90±0.20	3.1	0.7MAX	±0.5
8	20.5	8.3	8.3	3.4	0.90±0.20	3.1	0.7MAX	±0.5
10	10	10.3	10.3	3.5	0.90±0.20	4.6	0.7MAX	±0.5
10	13	10.3	10.3	3.5	0.90±0.20	4.6	0.7MAX	±0.5
10	14.5	10.3	10.3	3.5	0.90±0.20	4.6	0.7MAX	±0.5
10	16.5	10.3	10.3	3.5	0.90±0.20	4.6	0.7MAX	±0.5
10	21	10.3	10.3	3.5	0.90±0.20	4.6	0.7MAX	±0.5
12.5	13.5	13.0	13.0	4.7	0.90±0.30	4.4	0.7MAX	±1.0
12.5	14.5	13.0	13.0	4.7	0.90±0.30	4.4	0.7MAX	±1.0
12.5	16.5	13.0	13.0	4.7	0.90±0.30	4.4	0.7MAX	±1.0
12.5	21	13.0	13.0	4.7	0.90±0.30	4.4	0.7MAX	±1.0
16	16.5	17.0	17.0	5.5	1.20±0.30	6.7	0.7±0.30	±1.0
16	21	17.0	17.0	5.5	1.20±0.30	6.7	0.7±0.30	±1.0
18	16.5	19.0	19.0	6.7	1.20±0.30	6.7	0.7±0.30	±1.0
18	21	19.0	19.0	6.7	1.20±0.30	6.7	0.7±0.30	±1.0

Ripple Current Correction Factor

Frequency(Hz)		120	1K	10K	100K≤
Coefficient	0.47~8.2	0.42	0.60	0.80	1.00
	10~39	0.45	0.75	0.90	1.00
	47~180	0.50	0.80	0.95	1.00
	220 and above	0.60	0.85	0.95	1.00

■ Standard Size

Voltage (V)	10		16		25		35		50		63	
Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)
1.0									5×10	32	5×10	32
1.5									5×10	32	5×10	32
1.8									5×10	32	5×10	32
2.2									5×10	45	5×10	45
2.7									5×10	45	5×10	45
3.3									5×10	63	5×10	63
3.9									5×10	63	5×10	63
4.7									5×10	90	5×10	90
5.6									5×10	90	5×10	90
6.8									5×10	94	5×10	94
8.2									5×10	98	5×10	98
10	5×10	72	5×10	72	5×10	72	5×10	81	5×10	98	5×10	108
15									5×10	108	5×10	118
22	5×10	72	5×10	72	5×10	72	5×10	81	6.3×10	170	6.3×10	180
33									6.3×10	245	6.3×12	265
33											8×10	280
47	5×10	114	5×10	114	5×10	114	6.3×10	240	6.3×12	320	8×10	420
47									8×10	330		
56									8×10	330	8×10	420
100	5×10	114	6.3×10	200	6.3×10	240	8×10	324	8×12.5	500	8×16.5	590
100									10×10	550	10×13	590
150	6.3×10	162	6.3×10	240	8×10	324	8×12.5	380				
150	6.3×10	200					10×10	324				
220	6.3×10	324	8×10	324	8×12.5	380	8×12.5	650	10×16.5	940	10×21	860
330	6.3×12	380	8×10	380	8×14.5	650	10×13	850	12.5×16.5	980	12.5×21	1050
330	8×10	324			10×13	650						
470	8×10	620	8×12.5	650	10×13	850	10×16.5	1000	12.5×21	1050	16×21	1570
1000	10×13	1000	10×16.5	1000	10×21	1155	12.5×21	1500	18×21	2290		
2200	12.5×16.5	1500	12.5×21	1500	18×21	2400						
3300	12.5×21	1780	18×21	2400								
4700	18×21	2400										

Standard Size

Voltage (V)	80		100		160		200		250		400	
Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)
0.47					6.3×10	48	6.3×10	68	6.3×10	68	6.3×10	54
1.0	5×10	32	5×10	32	6.3×10	48	6.3×10	68	6.3×10	68	6.3×10	54
1.5	5×10	32	5×10	32	6.3×10	48	6.3×10	68	6.3×10	68	6.3×10	68
1.8	5×10	32	5×10	32	6.3×10	68	6.3×10	72	6.3×10	81	6.3×10	68
2.2	5×10	45	5×10	45	6.3×10	68	6.3×10	81	6.3×10	81	6.3×10	80
2.7	5×10	45	5×10	45	6.3×10	68	6.3×10	81	6.3×10	81	8×10	100
3.3	5×10	63	5×10	63	6.3×10	72	6.3×10	85	6.3×10	90	8×10	110
3.9	5×10	63	5×10	63	6.3×10	72	6.3×10	90	6.3×12	110	8×12.5	125
4.7	5×10	90	5×10	90	6.3×10	81	6.3×12	110	6.3×12	110	8×12.5	125
4.7									8×10	90	10×10	125
5.6	5×10	90	6.3×10	90	6.3×10	85	8×10	117	8×10	117	8×14.5	130
6.8	5×10	90	6.3×10	90	6.3×12	90	8×10	117	8×10	162	10×13	208
8.2	5×10	90	6.3×10	90	8×10	107	8×12.5	165	8×12.5	165	8×20.5	250
8.2							10×10	160	10×10	160	10×14.5	260
10	6.3×10	108	6.3×10	180	8×10	107	8×14.5	210	8×14.5	210	10×16.5	330
10							10×10	160			12.5×14.5	360
15	6.3×10	180	6.3×12	210	8×12.5	117	8×16.5	210	8×16.5	210	12.5×16.5	410
15			8×10	180								
22	6.3×12	210	8×12.5	230	8×14.5	160	8×20.5	250	8×20.5	250	12.5×21	500
22	8×10	180	10×10	198	10×13	178	10×14.5	250	10×14.5	250		
33	6.3×12	230	8×12.5	280	10×14.5	255	10×21	340	10×21	340	16×21	730
33	8×10	198	10×10	280								
47	8×12.5	280	10×13	350	10×21	400	12.5×21	400	12.5×21	400	18×21	850
47	10×10	280										
56	10×10	280	10×13	350	12.5×16.5	608	12.5×21	500	12.5×21	500		
100	10×16.5	550	12.5×16.5	700	16×21	825	16×21	800	18×21	800		
220	12.5×21	890	16×21	1155								
330	12.5×21	1050	18×21	1400								
470	18×21	1400										

Voltage (V)	450		Voltage (V)	450		Voltage (V)	450		Voltage (V)	450	
Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)	Items	Size D×L(mm)	Ripple Current (mA/r.m.s /125°C100KHz)
0.47	6.3×10	60	2.7	8×10	120	6.8	10×14.5	260	15	12.5×16.5	410
1.0	6.3×10	60	3.3	8×12.5	120	8.2	8×20.5	260	22	12.5×21	500
1.5	6.3×10	60	3.9	8×12.5	130	8.2	10×14.5	260	33	16×21	820
1.8	8×10	84	4.7	8×14.5	130	10	10×16.5	320	47	18×21	980
2.2	8×10	90	5.6	10×13	140	10	12.5×14.5	360			