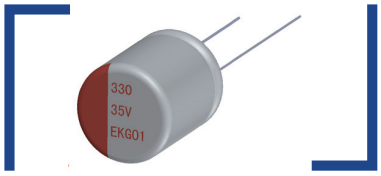
SEK Series

特点 Features



- 保证115℃ 2000小时。Endurance: 2000 h at 115℃.
- 额定电压范围：10~100V DC。Rated Voltage Range:10~100V DC.
- 适用于主板、VGA、直流/直流转换器、开关电源 、QC协议手机充电器、PD协议充电器。
  Applications : motherboards, VGA, DC/DC Converter, Switching Power Supply,
  QC protocol phone charger, PD protocol charger.
- 满足RoHS要求。RoHS Compliant and lead-free.
- 满足无卤要求。Halogen Free compliant.

主要技术性能 Specifications

项目 Items	特性 Characteristics	
工作温度范围 Operating Temperature Range	-55~+115℃	
额定电压范围 Rated Voltage Range	10~100V DC	
标称电容量范围 Nominal Capacitance Range	15~2200μF	
标称电容量允许偏差 Nominal Capacitance Tolerance	±20%（20℃，120Hz）	
漏电流 Leakage Current	≤0.1CV(μA) 20℃， 2分钟 at 20℃， after 2 minutes C：静电容量(μF)、V：额定电压(VDC)	
损耗角正切（tgδ） Dissipation Factor (Max)	20℃, 120Hz	额定电压(Vdc) 10~25V 35~100V Tgδ 0.14 0.10
等效串联电阻 ESR	参照规格表 Reference parameter table (mΩ at 100k~300kHz 20℃ max)	
耐久性 Load Life	+115℃施加额定电压2000小时后，待温度恢复到20℃后进行测试，电容器应满足以下要求： After 2000 hours' application of rated voltage at 115℃, and then being stabilized at +20℃, the capacitors shall meet the following requirement:	
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not to exceed 150% of the value specified
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not to exceed 150% of the value specified
	漏电流 Leakage Current	≤ 初始规定值 Not to exceed the value specified
高温贮存 Shelf Life Test	在115℃±2℃环境中，无负荷放置1000H后，待温度恢复到20℃后进行测试，电容器应满足以下要求： After storage for 1000 hours at +115℃±2℃ with no voltage applied and then being stabilized at +20℃, the capacitors shall not exceed the specified values listed below:	
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not to exceed 150% of the value specified
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not to exceed 150% of the value specified
	漏电流 Leakage Current	≤ 初始规定值 Not to exceed the value specified

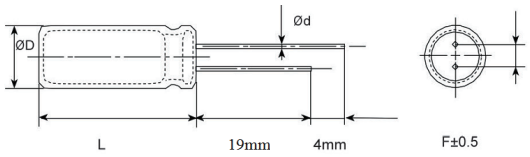
※ 当产生疑问的时候，用以下电压处理后测定。
电压处理: 125℃下，连续加载120 分钟的电压。加载电压为额定电压。
When in doubt, apply the following voltage treatment and measure.
Voltage processing: under the condition of 125 ℃ ambient temperature, continuous load voltage of 120 minutes. Load voltage is rated voltage.

Surge Components Inc. (USA)
sales@surgecomponents.com
+1 (631) 595-1818

Surge Components EMEA (Europe)
emea@surgecomponents.com
+44-204-593 0098

Surge Components.Ltd. (Asia)
surgehk@surgecomponents.com.hk
+852-2172-7607

尺寸图 Dimensions



尺寸表 Size List

单位 Unit: mm

ΦD (+0.5max)	6.3 (L<8)	6.3	8	10
F (±0.5)	2.5	2.5	3.5	5
Φd(±0.05)	0.5	0.6	0.6	0.6
L	+1max			

标称电容量、额定电压、额定纹波电流与尺寸对应表
Nominal Capacitance, Rated Voltage, Rated Ripple Current and Case Size Table

Rated Volt. (V)	Capacitance (uF)	Size ΦD×L(mm)	Tanδ (120HZ,20℃)	LC (μA)	ESR (mΩ/at 100k~300kHz 20℃ max)	Rated R. C. (mA/rms at 100kHz, 115℃)
10	270	6.3×7	0.14	270	20	2325
	330	6.3×8	0.14	330	20	2475
	560	6.3×9	0.14	560	18	2625
	560	6.3×11	0.14	560	16	2700
	680	8×8	0.14	680	16	2700
	820	8×9	0.14	820	15	2925
	1000	8×12	0.14	1000	14	3225
	1200	8×16	0.14	1200	12	3600
	1500	10×12.5	0.14	1500	10	3825
	2200	10×16	0.14	2200	10	4050
16	220	6.3×7	0.14	352	28	2025
	270	6.3×8	0.14	432	26	2175
	330	6.3×9	0.14	528	24	2325
	470	6.3×11	0.14	752	20	2550
	470	8×8	0.14	752	20	2550
	560	8×9	0.14	896	18	2700
	820	8×12	0.14	1312	15	2925
	1000	8×16	0.14	1600	15	3150
	1200	10×12.5	0.14	1920	12	3375
	1800	10×16	0.14	2880	12	3450
25	100	6.3×7	0.14	250	35	1575
	150	6.3×8	0.14	375	30	1725
	180	6.3×9	0.14	450	28	1875
	220	6.3×11	0.14	550	24	2025
	220	8×8	0.14	550	24	2025
	330	6.3×11	0.14	825	24	2175
	330	8×9	0.14	825	22	2175
	390	8×12	0.14	975	20	2475
	470	6.3×15	0.14	1175	15	2600
	560	8×16	0.14	1400	18	2700
	680	10×12.5	0.14	1700	15	2850
	1000	10×16	0.14	2500	15	3150
35	56	6.3×7	0.1	196	48	1350
	68	6.3×8	0.1	238	45	1500
	100	6.3×9	0.1	350	40	1650

Surge Components Inc. (USA)
sales@surgecomponents.com
+1 (631) 595-1818

Surge Components EMEA (Europe)
emea@surgecomponents.com
+44-204-593 0098

Surge Components.Ltd. (Asia)
surgehk@surgecomponents.com.hk
+852-2172-7607

Rated Volt. (V)	Capacitance (uF)	Size ΦD×L(mm)	Tanδ (120HZ,20℃)	LC (μA)	ESR (mΩ/at 100k~300kHz 20℃ max)	Rated R. C. (mA/rms at 100kHz, 115℃)
35	120	6.3×11	0.1	420	38	1725
	120	8×8	0.1	420	38	1725
	150	8×9	0.1	525	35	1950
	220	8×12	0.1	770	32	2175
	270	8×16	0.1	945	30	2325
	330	10×12.5	0.1	1155	28	2475
	470	10×16	0.1	1645	28	2625
	680	10×16	0.1	2380	20	2800
	820	10×16	0.1	2870	20	3000
50	27	6.3×7	0.1	135	48	1350
	33	6.3×8	0.1	165	45	1500
	39	6.3×9	0.1	195	42	1612
	56	6.3×11	0.1	280	42	1650
	56	8×8	0.1	280	42	1650
	68	8×9	0.1	340	40	1800
	100	8×12	0.1	500	40	1800
	120	8×16	0.1	600	38	1950
	150	10×12.5	0.1	750	35	2175
	220	10×16	0.1	1100	32	2325
63	15	6.3×7	0.1	94	50	1125
	22	6.3×8	0.1	138	50	1200
	27	6.3×9	0.1	170	45	1312
	39	6.3×11	0.1	245	45	1425
	39	8×8	0.1	245	45	1425
	47	8×9	0.1	296	42	1575
	68	8×12	0.1	428	40	1800
	100	8×16	0.1	630	38	1950
	100	10×12.5	0.1	630	35	2175
	150	10×16	0.1	945	32	2325
80	27	8×8	0.1	216	55	1125
	33	8×9	0.1	264	50	1275
	47	8×12	0.1	376	45	1425
	68	8×16	0.1	544	42	1500
	82	10×12.5	0.1	656	40	1725
	100	10×16	0.1	800	36	1950
100	15	8×8	0.1	150	55	1125
	22	8×9	0.1	220	50	1275
	27	8×12	0.1	270	45	1425
	33	8×16	0.1	330	42	1500
	47	10×12.5	0.1	470	40	1725
	68	10×16	0.1	680	36	1950

额定纹波电流频率修正系数
Frequency correction factor for ripple current

Frequency (KHz)	0.1≤Freq.≤0.5	0.5 < Freq.≤1	1 < Freq.≤5	5 < Freq.≤10	10 < Freq.≤50	50 < Freq. < 100	100≤Freq.≤300
Coefficient	0.10	0.30	0.4	0.6	0.75	0.9	1

Surge Components Inc. (USA)
sales@surgecomponents.com
+1 (631) 595-1818

Surge Components EMEA (Europe)
emea@surgecomponents.com
+44-204-593 0098

Surge Components.Ltd. (Asia)
surgehk@surgecomponents.com.hk
+852-2172-7607

Product symbol system for Aluminum Electrolytic Capacitors

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
① Series			② Voltage		③ Capacitance			④ Tolerance	⑤ Size code				⑥ Terminal Code			⑦ Brand	⑧ Sleeve	⑨ Other	⑩ Supplement Code	

① Series

Series is represented by a two-letter code. For example "SGR".

② Voltage

Voltage in volts(V) is represented by a one-digit and one-letter code.
Example:

Voltage(V)	2.5	4	6.3	10	16	25	35	50	63	80	100
Code	0E	0G	0J	1A	1C	1E	1V	1H	1J	1K	2A

Voltage(V)	160	200	250	315	350	400	420	450	500	550
Code	2C	2D	2E	2F	2V	2G	2M	2W	2H	2L

③ Capacitance

Capacitance in μF is represented by a three-digit code.the first two digis are significant and the third digit indicates the number of zeros following the significant figure "R" represents the decimal point for capacitance under 10μF.
Example:

Capacitance(μF)	0.1	0.47	1	4.7	10	47	100	470	1000	4700	10000
Code	0R1	R47	010	4R7	100	470	101	471	102	472	103

④ Tolerance

Tolerance is represented by a one-letter code.
Example:

Tolerance(%)	-5~+5	-10~+10	-15~+15	-20~+20	-0~+20	-5~+20	-10~+20	-0~+30	+10~+30	-10~+30	-15~+20
Code	J	K	Y	M	R	H	V	F	G	Q	E

⑤ Size code

Size code is represented by a one-letter and three-digit code. The first one-letter indicate case diameter in mm .The last three digits indicate case length in mm, When the height of a product exceeds 100mm, if the last digit is 0,it is represented by A, otherwise, it is represented by B .
Example:

ΦD	4	5	6.3	8	10	12	12.5	13	16	18	20	22	25	30	35	40	50	63.5	89
Code	B	C	E	F	G	H	I	J	L	M	O	P	Q	R	S	T	U	W	Y

L	5	5.4	9	10	11	11.5	12	14	16	20	25	50	100	105	110	115	120	200	205
Code	050	054	090	100	110	115	120	140	160	200	250	500	10A	10B	11A	11B	12A	20A	20B

Note:When a case size is required and not shown in the table ,please contact with us for further discussion.

⑥ Terminal Code

Terminal Code is represented by a combination of letters or numbers
SMD Type terminal code (please refer to page11)
Radial type terminal code (please refer to page 12~15)
Snap-in Type and ScrewType terminal code(please refer to page 16~17)
Note:When a terminal code is required and not shown in the table ,please contact with us for further discussion.

⑦ Brand

The Surge trademark is represented by the letter "S".

⑧ Sleeve

The sleeve material is represented by the letter E for PET and V for PVC.

⑨ Other

It is represented by a letter or number for rubber shape or other information.

⑩ Supplement Code

For special control purposes.

For example: SGR 16V 2200μF 20% 12.5×25 taping F=5.0 Brand: Surge PVC Sleeve

S	G	R	1	C	2	2	2	M	I	2	5	0	B	5	0	S	V	0

https://surgecomponents.com

Surge Components Inc. (USA)
sales@surgecomponents.com
+1 (631) 595-1818

Surge Components EMEA (Europe)
emea@surgecomponents.com
+44-204-593 0098

Surge Components.Ltd. (Asia)
surgehk@surgecomponents.com.hk
+852-2172-7607