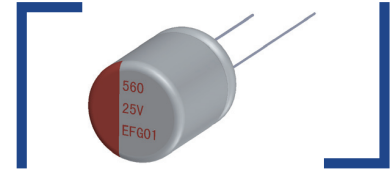


## 特点 Features

- 保证105°C 5000小时。Endurance: 5000 h at 105°C.
- 额定电压范围：10~100V DC。Rated Voltage Range:10~100V DC.
- 适用于系统板、显卡、服务器、多功能充电电源、智能电视、液晶电视电源、逆变器。

Applications : system board, display card, Servers, Multi-function charging power supply, intelligent TV, LCD-TV power, Inverter.

- 满足RoHS要求。RoHS Compliant and lead-free.
- 满足无卤要求。Halogen Free compliant.

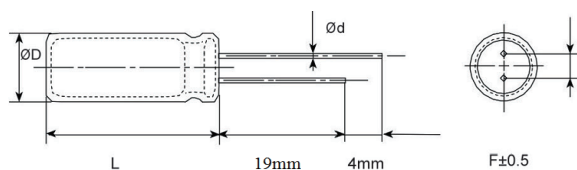


## 主要技术性能 Specifications

项目 Items	特性 Characteristics		
工作温度范围 Operating Temperature Range	-55~+105°C		
额定电压范围 Rated Voltage Range	10~100V DC		
标称容量范围 Nominal Capacitance Range	22~2200μF		
标称容量允许偏差 Nominal Capacitance Tolerance	±20% (20°C, 120Hz)		
漏电流 Leakage Current	≤0.1CV(μA) 20°C, 2分钟 at 20°C, 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°C, 120Hz	额定电压(Vdc)	10~25V
		Tgδ	0.14
等效串联电阻 ESR	参照规格表 Reference parameter table (mΩ at 100k~300kHz 20°C max)		
耐久性 Load Life	+105°C施加额定电压5000小时后, 待温度恢复到20°C后进行测试, 电容器应满足以下要求: After 5000 hours' application of rated voltage at 105°C, and then being stabilized at +20°C, 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105°C±2°C环境中, 无负荷放置1000H后, 待温度恢复到20°C后进行测试, 电容器应满足以下要求: After storage for 1000 hours at +105°C±2°C with no voltage applied and then being stabilized at +20°C, 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°C下, 连续加载120 分钟电压。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 °C ambient temperature, continuous load voltage of 120 minutes. Load voltage is rated voltage.

## 尺寸图 Dimensions



## 尺寸表 Size List

单位 Unit: mm

ΦD (+0.5max)	8	10
F (±0.5)	3.5	5
Φd(±0.05)	0.6	0.6
L	+1.0max	

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°C)	LC (μA)	ESR (mΩ/at 100k~300kHz 20°C max)	Rated R. C. (mA/rms at 100kHz, 105°C)
10	1000	8×12	0.14	1000	14	4300
	1200	8×16	0.14	1200	12	4800
	1500	10×12.5	0.14	1500	10	5100
	2200	10×16	0.14	2200	10	5400
16	680	8×12	0.14	1088	15	3900
	820	8×16	0.14	1312	15	4200
	1000	10×12.5	0.14	1600	12	4500
	1500	10×16	0.14	2400	12	4600
25	180	8×12	0.14	450	20	3100
	330	8×12	0.14	825	20	3300
	470	8×12	0.14	1175	20	3450
	560	8×16	0.14	1400	18	3600
	560	10×12.5	0.14	1400	15	3800
	680	8×16	0.14	1700	18	3800
	680	10×12.5	0.14	1700	15	4000
	820	8×17	0.14	2050	15	3800
	820	10×16	0.14	2050	15	4200
1000	10×16	0.14	2500	15	4200	
35	100	8×12	0.1	350	32	2900
	220	8×16	0.1	770	30	3100
	330	10×12.5	0.1	1155	28	3300
	470	10×16	0.1	1645	28	3500
50	47	8×11.5	0.1	235	40	2300
	68	8×12	0.1	340	40	2400
	100	8×16	0.1	500	38	2600
	100	10×12.5	0.1	500	35	2900
	150	10×16	0.1	750	32	3100
63	47	8×12	0.1	296	40	2400
	68	8×16	0.1	428	38	2600
	150	10×12.5	0.1	945	35	2900
	180	10×16	0.1	1134	32	3100
80	27	8×12	0.1	216	45	1900
	33	8×16	0.1	264	42	2000
	47	10×12.5	0.1	376	40	2300
	68	10×16	0.1	544	36	2600
100	22	8×12	0.1	220	45	1900
	27	8×16	0.1	270	42	2000
	33	10×12.5	0.1	330	40	2300
	47	10×16	0.1	470	36	2600

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

## Product symbol system for Aluminum Electrolytic Capacitors



### 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  $\mu\text{F}$  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  $10\mu\text{F}$ .  
Example:

Capacitance( $\mu\text{F}$ )	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:

$\Phi\text{D}$	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 2200 $\mu\text{F}$  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
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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