

## 特点 Features

- 保证105°C 2000小时。Endurance: 2000 h at 105°C.
- 额定电压范围：10~100V DC。Rated Voltage Range:10~100V DC.
- 表面安装、耐清洗。Surface mounting, Resistance to clean.
- 满足RoHS要求。RoHS Compliant and lead-free.
- 满足无卤要求。Halogen Free compliant.



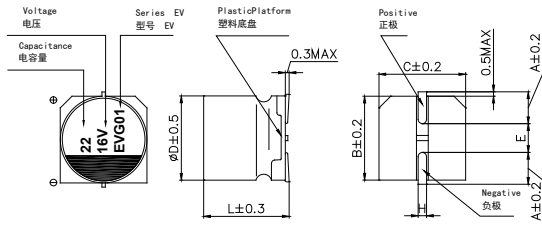
## 主要技术性能 Specifications

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		
标称电容范围 Nominal Capacitance Range	10~1500μF		
标称电容允许偏差 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      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°C max)		
耐久性 Load Life	+105°C施加额定电压2000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 2000 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	
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	

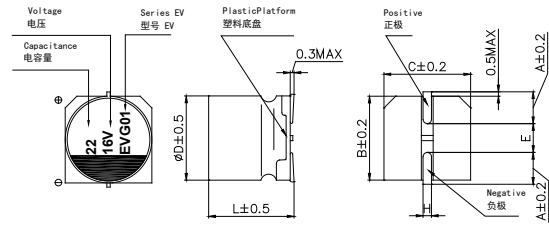
※ 当产生疑问的时候, 用以下电压处理后测定。  
电压处理: 125°C下, 连续加载120 分钟的电压。加载电压为额定电压。  
When in doubt, apply the following voltage treatment and measure.  
Voltage processing: under the condition of 125 °C ambient temperature, continuous load voltage of 120 minutes. Load voltage is rated voltage.

## 尺寸图 Dimensions

Φ5 ~ Φ6.3



Φ8 ~ Φ10



## 尺寸表 Size List

单位 Unit: mm

	Φ6.3×7.7	Φ8×10.5	Φ8×12.5	Φ10×10.5	Φ10×12.5
A	2.4	2.9	2.9	3.2	3.2
B	6.6	8.3	8.3	10.3	10.3
C	6.6	8.3	8.3	10.3	10.3
E	2.2	3.1	3.1	4.5	4.5
L	7.7	10.5	12.5	10.5	12.5
H	0.5~0.8	0.8~1.1			

## 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 (μF)	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	220	6.3×7.7	0.14	220	20	3100
	270	6.3×7.7	0.14	270	20	3100
	820	8×12.5	0.14	820	14	4300
	680	8×10.5	0.14	680	16	3600
	1000	10×10.5	0.14	1000	14	4500
	1200	10×10.5	0.14	1200	14	4500
	1500	10×12.5	0.14	1500	10	5100
16	47	6.3×5.4	0.14	80	40	1500
	82	6.3×7.7	0.14	131	36	2000
	100	6.3×5.4	0.14	160	38	1650
	100	6.3×7.7	0.14	160	35	2100
	220	6.3×7.7	0.14	352	28	2700
	270	6.3×7.7	0.14	432	28	2700
	470	8×10.5	0.14	752	20	3400
	470	10×10.5	0.14	752	18	3700
	680	8×12.5	0.14	1088	15	3900
	820	10×10.5	0.14	1312	15	4200
25	1000	10×12.5	0.14	1600	12	4500
	47	6.3×5.4	0.14	117	40	1500
	100	6.3×5.4	0.14	250	38	1650
	100	6.3×7.7	0.14	250	35	2100
	180	8×12.5	0.14	450	24	2600
	220	8×10.5	0.14	550	24	2700
	220	10×10.5	0.14	550	20	3300
	330	8×12.5	0.14	825	20	3300
	470	10×10.5	0.14	1175	18	3500
560	10×12.5	0.14	1400	15	3800	

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)
35	47	6.3×7.7	0.1	165	48	1800
	100	8×10.5	0.1	350	38	2300
	150	8×12.5	0.1	525	32	2900
	220	10×10.5	0.1	770	28	3100
	270	10×12.5	0.1	945	25	3300
50	27	6.3×7.7	0.1	135	48	1800
	68	8×10.5	0.1	340	42	2200
	82	8×12.5	0.1	410	40	2400
	100	8×12.5	0.1	500	40	2500
	100	10×10.5	0.1	500	35	2600
	150	10×12.5	0.1	750	35	2900
63	10	6.3×7.7	0.1	63	50	1500
	33	8×10.5	0.1	208	45	1900
	56	8×12.5	0.1	353	40	2400
	68	10×10.5	0.1	428	35	2600
	100	10×12.5	0.1	630	35	2900
80	33	8×12.5	0.1	264	45	1900
	47	10×10.5	0.1	376	40	2100
	56	10×12.5	0.1	448	40	2300
100	22	8×12.5	0.1	220	45	1900
	33	10×10.5	0.1	330	40	2100
	33	10×12.5	0.1	330	40	2300

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 digits 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 indicates 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:

$\Phi$ 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 page 11)

Radial type terminal code (please refer to page 12~15)

Snap-in Type and Screw Type 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 $\times$ 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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