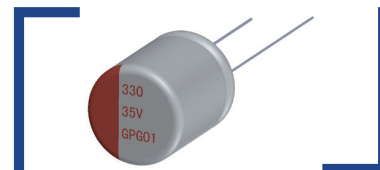


特点 Features

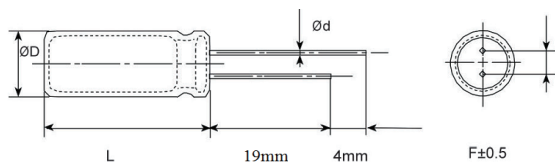
- 小型化、低漏电流、高可靠性。
Low profile、Low DC Leakage current、High reliability.
- 保证105°C 5000小时。
Endurance: 5000 h at 105°C.



主要技术性能 Specifications

项目 Items	特性 Characteristics								
工作温度范围 Operating Temperature Range	-55~+105℃								
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℃, 120Hz)								
漏电流 Leakage Current	≤0.05CV(μA) or 80μA ,whichever is greater 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	<table><tr><td>额定电压(Vdc)</td><td>10~25V</td><td>35~100V</td></tr><tr><td>Tgδ</td><td>0.14</td><td>0.10</td></tr></table>	额定电压(Vdc)	10~25V	35~100V	Tgδ	0.14	0.10	
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)								
高低温特性比 Characteristics of impedance ratio at high temp. and low temp	要求在100KHZ Based the value at 100KHZ. Z (-25℃) / Z (+25℃) ≤1.5 Z (-55℃) / Z (+25℃) ≤2.0								
耐久性 Load Life	在105℃环境中，不超过额定电压的范围下叠加额定纹波电流，连续加载额定电压5,000小时，待温度恢复到20℃后进行测试，电容器应满足以下要求： The capacitor shall be subjected to application of the D.C. voltage with full rated ripple current at +105 ℃ for 5000 hours. After stabilizing at 20 ℃, the capacitor shall not exceed the specified limits. (The sum of DC voltage and ripple peak voltage shall not exceed the rated voltage.)								
	电容量变化率 Capacitance Change	±25%初始值以内 Within ±25% of the initial value							
	损耗角正切 Dissipation Factor	≤ 200%初始规定值 Not to exceed 200% of the value specified							
	阻抗 Equivalent Series Resistance	≤ 200%初始规定值 Not to exceed 200% 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℃±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 +105℃±2℃ with no voltage applied and then being stabilized at +20℃ the capacitor shall not exceed the specified values listed below.								
	电容量变化率 Capacitance Change	±25%初始值以内 Within ±25% of the initial value							
	损耗角正切 Dissipation Factor	≤ 200%初始规定值 Not to exceed 200% of the value specified							
	阻抗 Equivalent Series Resistance	≤ 200%初始规定值 Not to exceed 200% of the value specified							
	漏电流 Leakage Current	≤ 初始规定值 Not to exceed the value specified							

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 (μF)	Size $\phi D \times L$ (mm)	Tan δ (120HZ, 20°C)	LC (μA)	ESR (m Ω /at 100k~300kHz 20°C max)	Rated R. C. (mA/rms at 100kHz, 105°C)
10	1000	8 $\times$ 12	0.14	500	16	3300
	1200	8 $\times$ 16	0.14	600	14	3500
	1500	10 $\times$ 12.5	0.14	750	13	3650
	2200	10 $\times$ 16	0.14	1100	12	3800
16	470	8 $\times$ 12	0.14	376	26	2450
	820	8 $\times$ 12	0.14	656	23	2900
	1000	8 $\times$ 16	0.14	800	20	3100
	1000	10 $\times$ 12.5	0.14	800	20	3100
	1000	10 $\times$ 16	0.14	800	16	3600
	1200	8 $\times$ 16	0.14	960	20	3100
	1500	10 $\times$ 12.5	0.14	1200	18	3300
	2200	10 $\times$ 16	0.14	1760	16	3600
25	180	8 $\times$ 12	0.14	225	28	2100
	220	10 $\times$ 12	0.14	275	22	2400
	270	8 $\times$ 12	0.14	337	28	2100
	330	8 $\times$ 12	0.14	412	24	2100
	330	10 $\times$ 12.5	0.14	412	20	2500
	390	8 $\times$ 12	0.14	487	23	2300
	470	8 $\times$ 12	0.14	587	23	2300
	470	8 $\times$ 16	0.14	587	21	2500
	470	10 $\times$ 12.5	0.14	587	20	2600
	680	8 $\times$ 16	0.14	850	20	2600
	680	10 $\times$ 12.5	0.14	850	18	2800
	680	10 $\times$ 16	0.14	850	16	3100
	820	10 $\times$ 16	0.14	1025	16	3100
	820	10 $\times$ 12.5	0.14	1025	18	2800
	1000	10 $\times$ 16	0.14	1250	16	3100

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	100	8×11	0.1	175	30	1600
	150	10×10	0.1	262	28	1900
	220	8×12	0.1	385	24	2100
	220	10×12.5	0.1	385	22	2400
	270	8×16	0.1	472	22	2200
	330	8×16	0.1	577	22	2200
	330	10×12.5	0.1	577	20	2500
	390	10×12.5	0.1	682	20	2500
	470	10×16	0.1	822	18	2800
50	68	10×12	0.1	170	30	1700
	100	8×12	0.1	250	30	1600
	150	8×16	0.1	375	28	1800
	180	10×12.5	0.1	450	26	2000
	220	8×14	0.1	550	30	1800
	220	8×16	0.1	550	28	1900
	220	10×12.5	0.1	550	24	2300
	270	10×16	0.1	675	24	2300
63	22	8×12	0.1	80	55	1200
	47	10×10	0.1	148	36	1400
	47	8×11.5	0.1	148	40	1300
	82	8×12	0.1	258	36	1400
	47	8×16	0.1	315	32	1600
	47	10×12.5	0.1	315	30	1700
	150	10×12.5	0.1	472	30	1800
	180	10×16	0.1	567	28	2100
80	33	8×12	0.1	132	55	1200
	47	8×16	0.1	188	50	1400
	56	10×12.5	0.1	224	45	1600
	82	10×16	0.1	328	40	1800
100	22	8×12	0.1	110	55	1200
	27	8×16	0.1	135	50	1400
	33	10×12.5	0.1	165	45	1600
	47	10×12.5	0.1	235	45	1700
	47	10×16	0.1	235	40	1800

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	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 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(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 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:

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 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 μF 20% 12.5 $\times$ 25 tapping 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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