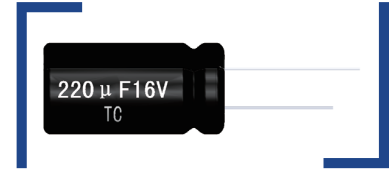


特点 Features

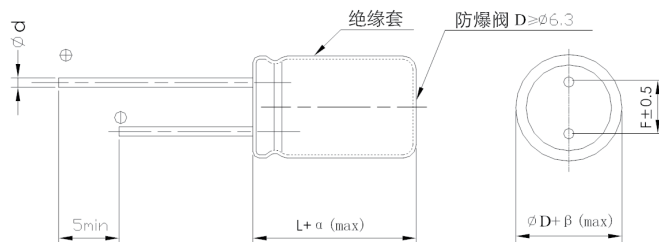
- 抗雷击, 小尺寸, 115°C, 2000小时。
Resistance to lightning, miniaturized, Load life of 2000 hours at 115°C.
- 适用于各种快充电源。Suitable for fast charging power supply.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

项目 Items	特性 Characteristics																													
使用温度范围 Operating Temperature Range	-40~+115°C	-25~+115°C																												
额定电压范围 Rated Voltage Range	10~100V	250~450V																												
标称电容容量范围 Nominal Capacitance Range	4.7~680μF																													
标称电容容量允许偏差 Capacitance Tolerance	±20% (+20°C, +20Hz)																													
漏电流 Leakage Current	I≤0.01CV (μA) or 3uA 2分钟(2 minute)	I≤0.03CV (μA) +40μA 2分钟(2 minute)																												
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <tr> <td>U_R (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>250</td> <td>400~450</td> </tr> <tr> <td>tgδ</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> <td>0.15</td> <td>0.20</td> </tr> </table>	U _R (V)	10	16	25	35	50	63	100	250	400~450	tgδ	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.15	0.20	容量大于1000μF者, 每增加1000μF, 其损耗角正切值增加0.02 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.								
	U _R (V)	10	16	25	35	50	63	100	250	400~450																				
tgδ	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.15	0.20																					
温度特性 Temperature Characteristic (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>U_R (V)</td> <td>10~100</td> <td>160</td> <td>250</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>4</td> <td>4</td> <td>6</td> <td>7</td> </tr> </table>	U _R (V)	10~100	160	250	400	450	Z-25°C / Z+20°C	3	4	4	6	7																	
U _R (V)	10~100	160	250	400	450																									
Z-25°C / Z+20°C	3	4	4	6	7																									
耐久性 Load Life	+115°C加额定电压2000小时, 恢复16小时后: After applying rated voltage for Load life of 2000h, at +115°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±30%初始测量值以内 ±30% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤ Initial specified value 损耗角正切值 Dissipation factor : ≤3倍初始规定值 ≤3times of the initial specified value																													
高温贮存 Shelf Life	+115°C, 1000小时贮存后, 加额定工作电压处理60分钟, 恢复16小时后: After storage for 1000 hours at +115°C, U _R to be applied for 60 minutes and then resumed 16 hours: 电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤ Initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value																													

外形图及尺寸表 Case Size Table



单位 Unit: mm

D	6.3	8	10~12.5	16~18
F	2.5	3.5	5.0	7.5
d	0.5	0.5, 0.6	0.6	0.8

αMAX	< L < 20 > 1.5	βMAX	< D < 20 > 0.5
	< L ≥ 20 > 2.0		< D ≥ 20 > 1.0

频率修正系数 Frequency Coefficient

10~100V

Frequency (Hz) \ CAP(μF)	50/60	120	1K	10K	100K
≤10	0.35	0.42	0.60	0.80	1.00
10~47	0.45	0.55	0.75	0.90	1.00
56~470	0.60	0.70	0.85	0.95	1.00
560~1500	0.65	0.75	0.90	0.98	1.00

250~450V

Frequency (Hz) \ CAP(μF)	50	120	1K	10K	≥50K
4.7~100	0.77	1.00	1.30	1.41	2.50

尺寸 Dimensions

WV \ CAP(μF)		10V(1A)		16V(1C)		25V(1E)	
		Size	Ripple	Size	Ripple	Size	Ripple
47	470					5×11	250
100	101	6.3×11	405	6.3×11	405	6.3×11	405
220	221	8×11.5	760	8×11.5	760	10×12.5	1030
330	331	8×11.5	760	10×12.5	1030	10×16	1430
470	471	10×12.5	1030	10×16	1430	10×20	1500
680	681	10×16	1430	10×20	1500	12.5×20	1720
1000	102	8×20	1450	12.5×20	1720	12.5×25	1900
		10×20	1500				
1500	152	12.5×20	1720	12.5×25	1900		

WV \ CAP(μF)		35V(1V)		50V(1H)		63V(1J)		100V(2A)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
22	220	5×11	250					10×12.5	480
33	330	6.3×11	405	8×11.5	300	8×11.5	150	10×12.5	480
47	470	6.3×11	405	8×11.5	440	10×12.5	530	10×16	630
68	680	8×11.5	760						
100	101	8×11.5	760	10×12.5	555	10×16	690	12.5×20	990
150	151	10×12.5	1030						
220	221					12.5×20	1050	16×25	1500
		10×16	1430	10×20	930				
330	331	10×25	1620	12.5×20	1330	12.5×25	1290	16×30	1790
470	471	12.5×20	1720	12.5×25	1650	12.5×35	1460		
680	681	12.5×25	1900	16×30	2430				

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 115°C 100KHz

WV \ CAP(μF)		250V(2E)		400V(2G)		450V(2W)	
		Size	Ripple	Size	Ripple	Size	Ripple
4.7	4R7	6.3×11	45	8×11	52	8×12	54
6.8	6R8	8×11	63	8.2×11.5	65	8.2×13	70
8.2	8R2	8.2×11.5	71	8.2×11.5	72	8.2×13	75
10	100	8.2×11.5	80	8.2×13	84	8.2×16	91
12	120	8.2×13	91	8.2×16	100	8.2×18	105
15	150	8.2×16	112	8.2×18	118	10×17	122
18	180	8.2×18	130	10×17	135	10×20	145
22	220	10×17	145	10×18	150	12.5×17	160
27	270	10×18	165	10×20	175	12.5×20	190
33	330	10×20	195	12.5×20	210	16×17	225
47	470	12.5×20	250	16×17	270	18×20	305
68	680	16×17	325	18×20	365	18×22	380
82	820	18×20	400	18×22	420	18×25	440
100	101	18×20	440	18×25	480	18×30	520

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 115°C 120Hz

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 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 $10\mu\text{F}$.

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 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 2200 μF 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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