

特点 Features

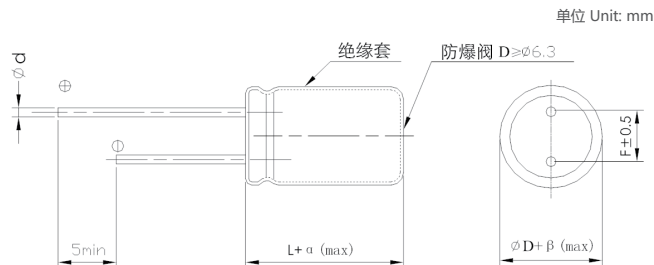
- 105°C 2000~5000小时寿命。
Load life of 2000~5000 hours at 105°C
- 高频率低阻抗、高纹波电流。
Enabled high ripple current by a reduction of impedance at high frequency range.
- 适用于电脑主机板的超低阻抗。
Lowest impedance for personal computer and storage equipment.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

项目 Items	特性 Performance Characteristics																											
使用温度范围 Operating Temperature Range	-55~+105°C																											
额定电压范围 Rated Voltage Range	6.3~100V																											
标称电容容量范围 Nominal Capacitance Range	4.7~6800μF																											
标称电容容量允许偏差 Capacitance Tolerance	± 20% (120Hz, +20°C)																											
漏电流 Leakage Current	I ≤ 0.01CV (μA) 或 3μA 2分钟 取较大者 (at 20°C, after 2 minutes, Whichever is greater)																											
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U_R (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table> <p>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.</p>	U _R (V)	6.3	10	16	25	35	50	63	100	tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.10									
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温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U_R (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	U _R (V)	6.3	10	16	25	35	50	63	100	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	Z-40°C / Z+20°C	8	6	6	4	3	3	3	3
U _R (V)	6.3	10	16	25	35	50	63	100																				
Z-25°C / Z+20°C	4	3	2	2	2	2	2	2																				
Z-40°C / Z+20°C	8	6	6	4	3	3	3	3																				
耐久性 Load Life	<p>持续时间 Duration:</p> <table border="1"> <thead> <tr> <th>ΦD</th> <th>5~6.3</th> <th>8</th> <th>10</th> <th>12.5~</th> </tr> </thead> <tbody> <tr> <td>Load life</td> <td>2000h</td> <td>3000h</td> <td>4000h</td> <td>5000h</td> </tr> </tbody> </table> <p>+105°C加额定电压, 恢复16小时后: After applying rated voltage at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤The initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>	ΦD	5~6.3	8	10	12.5~	Load life	2000h	3000h	4000h	5000h																	
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Load life	2000h	3000h	4000h	5000h																								
高温贮存 Shelf Life	<p>+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏电流 Leakage current : ≤2倍初始规定值 ≤2times of the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>																											

外形图及尺寸表 Case Size Table



D	5	6.3	8	10	12.5	16
F	2.0	2.5	3.5	5.0	5.0	7.5
d	0.5	0.5	0.5、0.6	0.6	0.6	0.8

频率修正系数 Frequency Coefficient

Freq.(Hz)	120	1K	10K	100K
CAP(μF)				
~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
4700~	0.85	0.95	0.98	1.00

αMAX	◁ L < 20 ▷ 1.5
	◁ L ≥ 20 ▷ 2.0

βMAX	◁ D < 20 ▷ 0.5
	◁ D ≥ 20 ▷ 1.0

尺寸 Dimensions

CAP(μF)		WV	6.3V(0J)			10V(1A)			16V(1C)			25V(1E)		
			Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
100	101		5×11	0.28	220	6.3×11	0.13	405	6.3×11	0.13	405	6.3×11	0.13	410
120	121								6.3×11	0.13	420			
220	221		6.3×11	0.13	405	6.3×11	0.13	420	6.3×11	0.102	450	8×11.5	0.072	760
						8×11.5	0.072	760	8×11.5	0.072	760			
330	331		6.3×11	0.13	420	8×11.5	0.072	795	8×11.5	0.072	795	8×11.5	0.056	995
									8×16	0.056	995	10×12.5	0.053	1030
470	471		8×11.5	0.072	760	8×11.5	0.056	820				8×14	0.065	1040
									10×12.5	0.053	1030	10×12.5	0.056	1160
560	561		8×11.5	0.072	795				8×20	0.041	1250			
680	681					8×11.5	0.056	995				10×16	0.032	1550
						8×20	0.041	1250	10×12.5	0.048	1160			
820	821		8×16	0.056	995	10×16	0.038	1430				10×20	0.030	1890
1000	102		10×12.5	0.053	1030				8×16	0.035	1400	10×20	0.028	2000
						10×20	0.030	1820	10×12.5	0.048	1430	12.5×12.5	0.032	1550
1200	122		8×20	0.041	1250	10×20	0.027	1950	10×20	0.027	1900			
			10×16	0.038	1430	12.5×20	0.025	2150						
1500	152		10×20	0.023	1820				12.5×20	0.025	2100	12.5×20	0.024	2400
2200	222		10×25	0.022	1980	12.5×25	0.018	2770	12.5×25	0.023	2850	12.5×25	0.020	2650
2700	272					12.5×30	0.016	2850	12.5×35	0.015	3150	16×25	0.016	3000
3300	332		12.5×20	0.021	2080	12.5×35	0.015	3150						
3900	392		12.5×25	0.018	2470	16×25	0.016	3018						
4700	472		12.5×30	0.016	2850							16×30	0.016	3260
5600	562		12.5×35	0.016	3150									
			16×20	0.015	3150									
6800	682		16×25	0.014	3250									

CAP(μF)		WV	35V(1V)			50V(1H)			63V(1J)			100V(2A)		
			Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
4.7	4R7											5×11	1.60	105
5.6	5R6											5×11	1.49	116
6.8	6R8											5×11	1.45	120
10	100											6.3×11	1.00	150
22	220								6.3×11	0.50	250	8×11.5	0.80	370
33	330								6.3×11	0.32	270	8×11.5	0.70	380
47	470		5×11	0.55	200	6.3×11	0.24	320	8×11.5	0.22	480	10×9	0.35	410
56	560		6.3×11	0.25	350							10×12.5	0.21	550
68	680								8×11.5	0.20	550	10×16	0.18	630
82	820											10×16	0.15	700
100	101		6.3×11	0.15	400	8×11.5	0.15	610	10×12.5	0.14	720	10×20	0.09	970
220	221		8×16	0.065	980	10×12.5	0.065	1000	10×25	0.075	1315	12.5×20	0.065	1500
			10×12.5	0.060	1050	12.5×12.5	0.050	1450	10×20	0.080	1180			
270	271								12.5×20	0.060	1560			
330	331		8×20	0.041	1210	10×20	0.05	1500	10×30	0.047	1750	16×25	0.045	2150
			10×12.5	0.045	1160									
470	471		10×16	0.045	1500	12.5×20	0.035	1900	12.5×25	0.038	2000	16×30	0.030	2350
			12.5×12.5	0.045	1450	10×20	0.055	1650	16×20	0.038	2300			
680	681		12.5×20	0.035	2150									
820	821					16×20	0.034	2100						
1000	102		12.5×20	0.032	2180	16×25	0.025	2700	16×30	0.028	2850			
1200	122		12.5×25	0.028	2300									
1500	152		16×25	0.026	2700									

Size φD×L(mm)
 Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz
 Maximum ESR (Ω) at 20°C 100KHz

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 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 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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