SGD SERIES

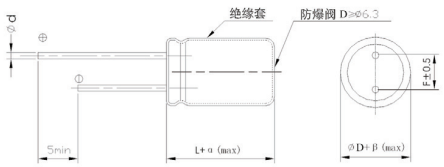
特点 Features

- 100KHZ 低阻抗，105℃ 2000小时。Low impedance at 100KHZ, Load life：105℃ 2000 hours.
- 在高频范围内降低ESR，承受高纹波电流，适用于电脑主机板。
  Enabled high ripple current by a reduction of ESR at high frequency range.
  Suitable for motherboard.
- 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℃
额定电压范围 Rated Voltage Range	6.3~25V
标称电容量范围 Nominal Capacitance Range	220~4700μF
标称电容量允许偏差 Capacitance Tolerance	±20% (120Hz, +20°C)
漏电流 Leakage Current	I≤0.01CV (μA) 2分钟(at 20℃, after 2 minutes)
损耗角正切值 (tgδ) Dissipation Factor (+20℃, 120Hz)	U_R (V): 6.3 / 10 / 16 / 25 tgδ: 0.22 / 0.19 / 0.16 / 0.14 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.
温度特性Temperature Characteristics (Impedance ratio at 120Hz)	U_R (V): 6.3 / 10 / 16 / 25 Z-40℃ / Z+20℃: 8 / 6 / 6 / 4
耐久性 Load Life	+105℃加额定电压2000小时，恢复16小时后： After applying rated voltage for 2000 hours at +105℃ 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
高温贮存 Shelf Life	+105℃，1000小时贮存后，恢复16小时后： After storage for 1000 hours at +105℃ 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

外形图及尺寸表 Case Size Table



单位 Unit: mm

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

αMAX	‹ L＜20 › 1.5
	‹ L≥20 › 2.0

βMAX	‹ D＜20 › 0.5
	‹ D≥20 › 1.0

频率修正系数 Frequency Coefficient

Freq.(Hz) / CAP(μF)	120	1K	10K	100K
220~4700	0.50	0.80	0.90	1.00

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
220	221							6.3×11	0.135	520	8×11.5	0.060	760
								8×11.5	0.102	560			
270	271				8×11.5	0.085	780	6.3×11	0.115	540	8×11.5	0.060	780
330	331										8×11.5	0.056	780
470	471	6.3×11	0.095	420	8×11.5	0.046	820	8×11.5	0.052	1036	8×16	0.048	1050
											10×12.5	0.045	1072
680	681	8×11.5	0.058	780	8×11.5	0.043	1036	8×16	0.040	1355	10×16	0.038	1200
								10×12.5	0.038	1400			
820	821	8×11.5	0.043	1036									
1000	102	8×11.5	0.036	1120	10×12.5	0.034	1355	8×20	0.025	1700			
								10×16	0.023	1818			
1200	122	8×16	0.034	1355									
		8×20	0.032	1700									
1500	152	8×20	0.026	1750	8×20	0.025	1700	10×20	0.022	2318			
		10×12.5	0.030	1400	10×16	0.028	1818						
1800	182	10×16	0.028	1818	10×20	0.025	2318	10×25	0.019	2410			
2200	222	10×20	0.025	2318	10×25	0.020	2400	12.5×20	0.018	2450			
3300	332	10×25	0.020	2545									
4700	472	10×30	0.018	2665									

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

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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 digis are significant and the third digit indicates the number of zeros following the significant figure "R" represents the decimal point for capacitance under 10μF.
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 2200μF 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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