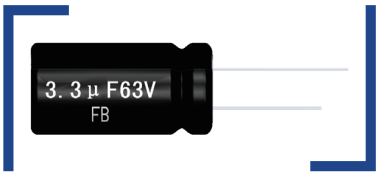
SFB SERIES

特点 Features

- 双极性，标准品，用于极性翻转或极性变换的电路中。
  Bi-polar Standard series, used in polarity reverse and change circuits.
- RoHS指令已对应完毕。
  Adapted to the RoHS directive.



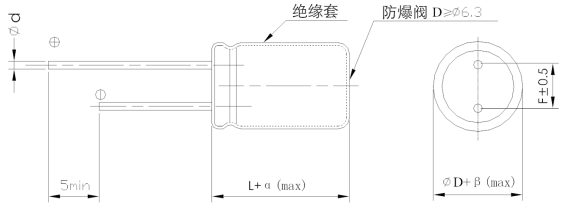
主要技术性能 Specifications

项目 Items	特性 Characteristics
使用温度范围 Operating Temperature Range	-40~+105℃
额定电压范围 Rated Voltage Range	6.3~100V
标称电容量范围 Nominal Capacitance Range	0.47~4700μF
标称电容量允许偏差 Capacitance Tolerance	±20%（120Hz，+20℃）
正反向漏电流 Leakage Current	I ≤0.03CV +3(μA) 2分钟（at 20℃, after 2 minutes）
损耗角正切值（tgδ） Dissipation Factor (+20℃, 120Hz)	UR (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 tgδ: 0.28 / 0.24 / 0.22 / 0.20 / 0.15 / 0.14 / 0.13 / 0.13
温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	UR (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 Z-25℃ / Z+20℃: 4 / 3 / 2 / 2 / 2 / 2 / 2 / 2 Z-40℃ / Z+20℃: 10 / 8 / 6 / 5 / 4 / 4 / 3 / 3
耐久性 Load Life	105℃加额定电压2000小时（每250小时反转极性一次）恢复16小时后： After applying rated voltage for2000 hours at 105℃(with the polarity inverted every 250 hours) 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
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 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： ≤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

频率修正系数 Frequency Coefficient

F(Hz) / CAP(uF)	60	120	1K	≥10k
0.47～68	0.8	1	1.45	1.7
100～470	0.8	1	1.35	1.5
680～4700	0.8	1	1.2	1.3

外形图及尺寸表 Case Size Table



单位 Unit: mm

D	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d	0.5	0.5	0.5、0.6	0.6	0.6	0.8	0.8

αMAX		βMAX	
	‹ L＜20 › 1.5		‹ D＜20 › 0.5
	‹ L≥20 › 2.0		‹ D≥20 › 1.0

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尺寸 Dimensions

CAP(μF) \ WV		6.3V(0J)		10V(1A)		16V(1C)		25V(1E)		35V(1V)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7	4R7									5×11	34
10	100					5×11	38	5×11	42	5×11	43
22	220			5×11	48	5×11	55	6.3×11	65	6.3×11	73
33	330	5×11	58	5×11	60	5×11	64	6.3×11	80	8×11.5	100
47	470	5×11	76	5×11	76	6.3×11	95	6.3×11	95	8×11.5	120
100	101	5×11	100	6.3×11	125	6.3×11	130	8×11.5	160	10×12.5	200
220	221	8×11.5	155	8×11.5	160	8×11.5	205	10×12.5	255	10×20	325
330	331	8×11.5	205	8×11.5	215	10×12.5	260	10×16	320	12.5×20	380
470	471	10×12.5	280	10×12.5	310	10×16	365	12.5×20	435	12.5×25	520
1000	102	10×16	360	10×20	445	12.5×20	535	12.5×25	580	16×25	780
2200	222	12.5×20	680	16×25	885	16×30	1050				
3300	332	16×25	1050	16×30	1150						
4700	472	16×30	1250								

CAP(μF) \ WV		50V(1H)		63V(1J)		100V(2A)	
		Size	Ripple	Size	Ripple	Size	Ripple
0.47	R47	5×11	8	5×11	9	5×11	10
1	010	5×11	12	5×11	15	5×11	16
2.2	2R2	5×11	18	5×11	22	6.3×11	24
3.3	3R3	5×11	27	5×11	28	6.3×11	30
4.7	4R7	5×11	34	6.3×11	34	6.3×11	35
10	100	5×11	34	6.3×11	57	8×11.5	71
		6.3×11	52				
22	220	8×11.5	89	8×11.5	95	10×16	135
33	330	8×11.5	105	10×12.5	135	10×20	185
47	470	10×12.5	150	10×16	180	12.5×20	200
100	101	10×16	205	12.5×20	320	16×25	425
220	221	12.5×20	360	12.5×25	430	16×35	520
330	331	16×25	550	16×30	580		
470	471	16×30	580	18×35	760		

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz

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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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