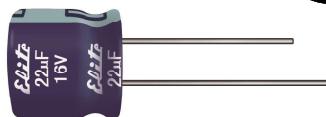


ALUMINUM ELECTROLYTIC CAPACITORS



SB & SB-H Series

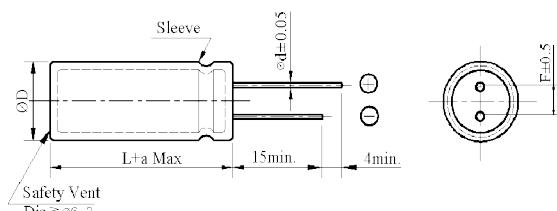


- Standard miniature series with 5mm height at 85°C & 105°C.

SPECIFICATIONS

Item	Performance Characteristics									
Series	SB						SB-H			
Category Temperature Range	-40 ~ +85°C						-40 ~ +105°C			
Working Voltage Range	4 ~ 50 Vdc									
Capacitance Range	0.1 ~ 470 μF									
Capacitance Tolerance	±20% (at 25°C and 120Hz)									
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V)	4	6.3	10	16	25	35	50		
	tanδ(Max)	0.37	0.28	0.22	0.18	0.16	0.14	0.12		
Leakage Current	$I=0.01CV$ or $3\mu A$ whichever is greater I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 2 minutes.									
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V)	4	6.3	10	16	25	35	50		
	Z(-40°C)/Z(+20°C)	15	8	8	6	4	4	3		
	(at 120Hz)									
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 1,000 hours at 85°C(SB), or 1,000 hours at 105°C(SB-H).									
	Capacitance change	$\leq \pm 25\%$ of the initial value (4V: $\pm 30\%$)								
	Dissipation factor(tanδ)	$\leq 200\%$ of the specified value								
	Leakage current	\leq specified value								
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 500 hours at 85°C(SB), or 500 hours at 105°C(SB-H) without voltage applied.									
	Capacitance change	$\leq \pm 25\%$ of the initial value								
	Dissipation factor(tanδ)	$\leq 200\%$ of the specified value								
	Leakage current	$\leq 200\%$ of the specified value								
Others	Conforms to JIS-C-5101-4 (1998), characteristic W.									

DIMENSIONS (mm)



ΦD	4	5	6.3	8×5
ΦD	ΦD + 0.5 Max			
Φd	0.45	0.45	0.45	0.45
F	1.5	2.0	2.5	3.5
a	L + 1.0 Max			

PART NUMBERING SYSTEM(Example : 50V 0.47μF)

S	B	1	H	R	4	7	M	N	N	0	4	0	5				
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Special Request

Size code(0405 : 4×5)

Lead length code

Lead forming Type code

Capacitance tolerance code(M: $\pm 20\%$)

Capacitance code (0.47μF)

Voltage code (50V)

Series code (SB)

ALUMINUM ELECTROLYTIC CAPACITORS



SB Series

- ◆ Case size & Permissible rated ripple current (mA rms) at 85°C/120Hz:

uF	Vdc	4		6.3		10		16	
		ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC
0.1									
0.22									
0.33									
0.47									
1.0									
2.2									
3.3									
4.7									
10									
22								4×5	32
33						5×5	38	5×5	42
47	5×5	35	5×5	41	5×5	45	6.3×5	58	
100	6.3×5	63	6.3×5	70	6.3×5	73	6.3×5	80	
220	6.3×5	70	6.3×5	95	8×5	120	8×5	125	
330	8×5	80	8×5	150					
470	8×5	150							

uF	Vdc	25		35		50	
		ΦD×L	RC	ΦD×L	RC	ΦD×L	RC
0.1						4×5	1
0.22						4×5	2
0.33						4×5	2.8
0.47						4×5	4
1.0						4×5	8.4
2.2						4×5	13
3.3						4×5	17
4.7			4×5	18	5×5	20	
10	4×5	24	5×5	29	6.3×5	33	
22	5×5	37	6.3×5	46	8×5	55	
33	6.3×5	45	6.3×5	50	8×5	65	
47	6.3×5	60	8×5	68			
100	8×5	90					

- ◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Frequency (Hz)				
	60	120	1K	10K	100K
4 ~ 25	0.75	1.00	1.10	1.13	1.20
35 ~ 50	0.80	1.00	1.15	1.20	1.25