

ALUMINUM ELECTROLYTIC CAPACITORS



SB & SB-H Series

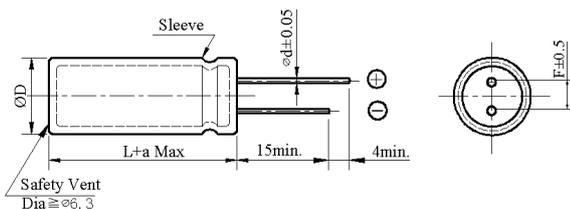
- Standard miniature series with 5mm height at 85°C & 105°C



◆ SPECIFICATIONS

Item	Performance Characteristics							
	SB				SB-H			
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
When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase.								
Leakage Current	I=0.01CV or 3µA 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	≧ ± 25% of the initial value						
	Dissipation factor(tanδ)	≧ 200% of the specified value						
Leakage current	≧ specified value							
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 500 hours at 85°C(SB), or 500 hours at 105°C(SB-H) without voltage applied.							
	Capacitance change	≧ ± 25% of the initial value						
	Dissipation factor(tanδ)	≧ 200% of the specified value						
Leakage current	≧ 200% of the specified value							
Others	Conforms to JIS-C-5101-4 (1998)							

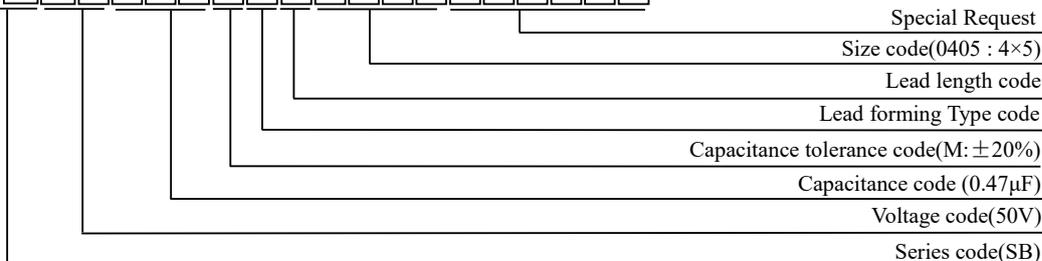
◆ DIMENSIONS (mm)



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 NUMBER SYSTEM(Example : 50V 0.47µF)

S B I H R 4 7 M N N 0 4 0 5



ALUMINUM ELECTROLYTIC CAPACITORS



SB-H Series

◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA _{rms} /105°C, 120Hz)	Part Number
4 (0G)	47	5×5	30	SB0G470MNN0505H
	100	6.3×5	60	SB0G101MNN6305H
	220	6.3×5	65	SB0G221MNN6305H
	330	8×5	70	SB0G331MNN0805H
	470	8×5	105	SB0G471MNN0805H
6.3 (0J)	47	5×5	32	SB0J470MNN0505H
	100	6.3×5	60	SB0J101MNN6305H
	220	6.3×5	72	SB0J221MNN6305H
	330	8×5	105	SB0J331MNN0805H
10 (1A)	33	5×5	33	SB1A330MNN0505H
	47	5×5	35	SB1A470MNN0505H
	100	6.3×5	62	SB1A101MNN6305H
16 (1C)	220	8×5	92	SB1A221MNN0805H
	22	4×5	22	SB1C220MNN0405H
	33	5×5	37	SB1C330MNN0505H
	47	6.3×5	50	SB1C470MNN6305H
	100	6.3×5	65	SB1C101MNN6305H
	220	8×5	96	SB1C221MNN0805H

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA _{rms} /105°C, 120Hz)	Part Number
25 (1E)	10	4×5	18	SB1E100MNN0405H
	22	5×5	25	SB1E220MNN0505H
	33	6.3×5	40	SB1E330MNN6305H
	47	6.3×5	54	SB1E470MNN6305H
	100	8×5	70	SB1E101MNN0805H
	35 (1V)	4.7	4×5	15
10		5×5	22	SB1V100MNN0505H
22		6.3×5	38	SB1V220MNN6305H
33		6.3×5	45	SB1V330MNN6305H
47		8×5	60	SB1V470MNN0805H
50 (1H)		0.1	4×5	0.8
	0.22	4×5	1.6	SB1HR22MNN0405H
	0.33	4×5	2.2	SB1HR33MNN0405H
	0.47	4×5	3.5	SB1HR47MNN0405H
	1	4×5	6	SB1H010MNN0405H
	2.2	4×5	11	SB1H2R2MNN0405H
	3.3	4×5	14	SB1H3R3MNN0405H
	4.7	5×5	18	SB1H4R7MNN0505H
	10	6.3×5	28	SB1H100MNN6305H
	22	8×5	42	SB1H220MNN0805H

◆ 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