

SB SERIES
**FEATURES: PROFESSIONAL GRADE LONG LIFE
RADIAL LEAD TYPE FOR DEFENCE
APPLICATION**
ENDURANCE: + 85°C, 2000 Hrs.
**REFERENCE
STANDARDS: JSS 50207 - CLU 07 STYLE**
**PRODUCT
MARKING**
**} PROVIDED WITH ORANGE COLOUR
SLEEVE AND BLACK PRINT**
1. SPECIFICATIONS

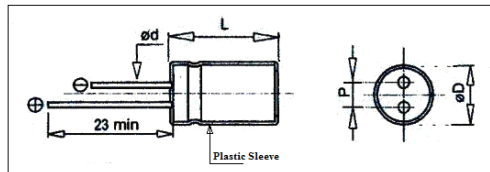
PARAMETERS.	PERFORMANCE CHARACTERISTICS			
Operating Temperature	- 40°C to +85°C			
Working Voltage	6.3 Vdc to 63 Vdc.			
Capacitance Range	0.47 µF to 6800 µF (at +27°C, 100Hz)			
Capacitance Tolerance	-10% to +50% (T) or ±20% (M) on request			
Leakage Current (After 5mt charging through 1000 Ω resistor) IL in µA	IL ≤ 0.01 CV or 1 µA, whichever is greater for CV ≤ 1000 and IL ≤ 0.006 CV + 4µA for CV >1000 Where IL = Leakage current in µA. C= Capacitance (µF), V= Working Voltage in Volt			
Dissipation factor (Tan δ) Max (at +27°C, 100Hz)	WV	6.3 ~ 10V	16 ~ 25V	35 ~ 63V
	Cap in µF			
	≤ 470 µF	24	19	13
	680 ~ 4700 µF	31	22	22
	> 4700 µF	50	50	50
Low Temperature Stability	W V	6.3 ~ 10V	16 ~ 63 V	
	Z - 40°C / Z + 27°C	4	3	
	Impedance Ratio at 100 Hz.			
Life Tests (i). Endurance Test at High Temperature +85°C at WV. (ii). Storage Test at High Temperature +85°C at 0V.	Tests	Endurance DC Life Test		Storage Shelf Life test
	Test Condition	Capacitor at rated voltage and At +85°C, for 2000 Hrs Measurements after recovery to +27°C		Capacitor under no voltage At +85°C for 500 Hrs Measurements after recovery to +27°C
	Parameters			
	Δ Capacitance	Within ± 15% of the initial measured Value		Within ± 10% of initial measured Value
	Tan δ	Within 130% of initial limit		Within 120% of initial limit
	D.C Leakage Current	Within initial limit		Within 200% of initial limit
	Impedance Change	Within 200% of initial Measured value at 10KHz		
	Visual	No seepage of electrolyte No damage of sleeve		No seepage of electrolyte No. damage of sleeve. Solderability test to be passed with wetting above 85%
Stability test at high temperature (Measurements after recovery to + 27°C)	Δ Capacitance	Within ± 10% of initial measured Value		
	Tan δ	Within 130% of initial measured Value		
	D.C Leakage current	Within 300% of initial limit		
	Visual	No seepage of electrolyte. No damage of sleeve.		

02. OTHER INFORMATION

Standard rating size, Dimensions and Physical outline	Refer Page no. 2
Capacitor Codification System	Refer Page no. 3
Marking Specification	Refer Page no. 4
Type of Packing and Lead Configuration	Bulk Packing - Straight Lead For details of packing refer page no. 5.

SB SERIES

3. PHYSICAL OUT LINE – SB SERIES



All dimensions in mm

Note: Cases Ø5.5, Ø6.5 and Ø8.5 are without safety vent. Cases Ø10.5, Ø13, Ø17 and Ø19 are with safety vent.

4. DIMENSIONS (All units in mm)

Case code and dimensional details of SB series radial type capacitors in sleeved conditions are given below.

JSS Case Code	A	B	C	D	E	F	G	H	J	K	L
Ø D max.	5.5	6.5	8.5	10.5	10.5	10.5	13	17	17	19	19
L max	11.5	12.5	12.5	15	17	21	26	27	31	37	41
Ø d +10% -0.05	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8
P ± 0.5	2	2.5	3.5	5	5	5	5	7.5	7.5	7.5	7.5
Eqvt. Keltron Case Code	HS	AS	BB	CD	CD	CG	DK	EK	ER	SH	SJ

5. STANDARD RATING TABLE

Provides information regarding applicable JSS case code.

Cap (µF) \ WV SV	6.3V 8V		10V 12V	16V 19V	25V 29V	40V 60V	63V 73V
	0.47						
0.68							A
1.0							A
1.5							A
2.2							A
3.3							A
4.7							A
6.8							A
10					A	B	B
15					A	B	C
22			A	B	B	B	C
33			A	B	B	C	C
47	A	B	B	B	C	C	D
68	B	B	C	C	C	C	E
100	B	C	C	C	C	E	F
150	C	C	D	D	D	E	G
220	C	D	E	E	E	G	G
330	D	D	E	F	F	G	H
470	D	E	F	G	G	G	H
680	F	F	H	G	H	H	K
1000	F	G	H	H	H	J	K
1500	F	G	H	J	J	K	
2200	H	H	H	J	J	K	
3300	H	J	J	K	K		
4700	J	J	K				
6800	K	L					

6. MARKING ON THE CAPACITOR

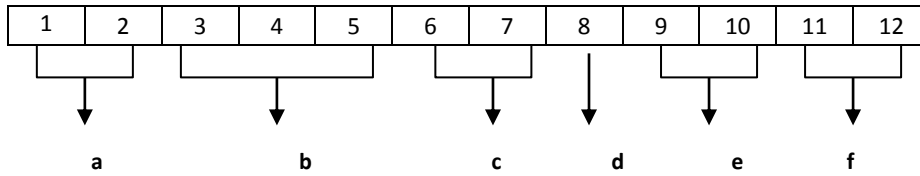
Radial SB series capacitors have the following details printed on the orange coloured sleeve with black print.

- a) Negative terminal identification with black band.
- b) Capacitor's type SB
- c) Rated capacitance in µF
- d) Rated working voltage in Vdc
- e) Manufacturer's Name
- f) Manufacturing date (Year-Month)

SB SERIES

1. CAPACITOR ORDERING INFORMATION:

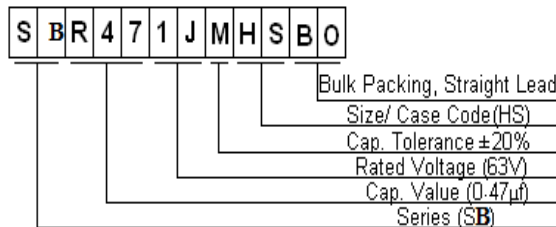
Capacitors are identified with the help of 12-digit code. Expansion of Part Nos. for SB series capacitors are detailed below.



a										
Series Code. Eg: SB										
b										
Capacitance Value Code										
Capacitance (µF)	0.1	1	0.22	2.2	22	220	2200			
Code	R10	010	R22	2R2	220	221	222			
c										
Voltage Code										
Working Voltage (V)	6.3	10	12	16	25	35	40	50	63	100
Code	0J	1A	1B	1C	1E	1V	1G	1H	1J	2A
d										
Tolerance Code										
Toleranc e	Capacitance Tolerance						Speci. Cap Tolerance	Speci. Tanδ Tolerance		
	±5%	± 10%	± 20%	± 30%	-10% +30%	-10% +50%				
Code	J	K	M	N	Q	T	A	S		
e				f						
Size Code				Capacitor Lead wire Termination Code						
Follow respective Dimensional specification. Eg: HS, AS, BB etc.				Provided by the factory based on customer requirements. Eg:						
				Item	Taped 5mm pitch	Taped 2.5mm pitch	Formed & cut	Kinking & cut	Bulk packing straight lead	
				Code	T0	T2	F0	FD	B0	

Capacitor Codification System:-

Example (i) 0.47µf / 63V; SB Series
Bulk Packing - Straight Lead



Note:

Manufacturer’s logo, capacitor series, upper category temperature and date code are marked only for sizes Ø 8mm and above.

SB SERIES

Date Code:

Date code is provided on the capacitor sleeve in Year – Month format for sizes Ø 8mm and above. Year & Month code of SB capacitor of diameter Ø 8mm & above are detailed below.

Year code

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Letter Code	M	N	P	R	S	T	U	V	W	X

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Letter Code	A	B	C	D	E	F	H	J	K	L

Year codes repeats after each cycle of 20 years.

Month Code

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sep.	Oct.	Nov	Dec.
Code	1	2	3	4	5	6	7	8	9	O	N	D

4. LEAD CONFIGURATION AND PRIMARY PACKING STANDARD FOR RADIAL ALUMINIUM ELECTROLYTIC CAPACITORS

LEAD CONFIGURATION

SB capacitors are available in the following lead configuration.

- STRAIGHT LEAD – Applicable to case code starting from HS (Size Ø5.5 x11 mm) to SJ (Size Ø19 x 41 mm).

PRIMARY PACKING STANDARD BULK PACKING

SB series capacitors are generally BULK PACKED in thick polythene bags which are heat sealed to avoid direct atmospheric exposure. Individual primary packing in polythene bag is provided with a LABEL which carries outgoing Inspection Report No, Work Order No, Capacitor Series, Capacitance Value, Working Voltage, Capacitor tolerance, Capacitor size, Capacitor Part No, Temperature, Quantity and Date of packing. **IT IS CUSTOMARY TO RETURN THE PACKING LABEL TO THE FACTORY IN CASE OF QUANTITY/QUALITY NON-CONFORMANCE.**

**SB
SERIES**

BULK PACKING QUANTITY DETAILS.

Size (Ø D x Lmm)	5x11	6.3x11	8x12.5	10x12.5	10x16	10x21	10x25	12.5x21
Case code	HS	AS	BB	CB	CD	CG	CK	DG
Nos/ Bag	500	500	500	300	300	300	200	200
Nos/ Carton	5000	4000	2500	1800	1500	1200	1000	800
Wt. (Kg) 1000 Nos (Approx)	2.2	2.6	2.6	3.3	3.0	2.9	3.3	3.2

Size (Ø D x Lmm)	12.5x25	16x25	16x31	16x36	18x31	18x37	18x41	22x37	22x41	22x52
Case code	DK	EK	ER	EU	SR	SH	SJ	TH	TJ	TM
Nos/ Bag	200	100	100	100	50	50	50	50	25	25
Nos/ Carton	600	400	300	300	200	200	200	150	125	75
Wt. (Kg) 1000 Nos (Approx)	2.8	2.7	2.9	3.3	2.4	2.8	3.2	3.1	2.8	2.2

PHYSICAL DIMENSIONS; UNIT (mm)

Case Diameter	H ± 0.5	H1	F ± 0.3	P ± 0.5	Ød ± 0.05	K (min)
Ø10	5.0	2.7	1.3	5.0	0.6	2.8
Ø 12.5	5.0	2.7	1.3	5.0	0.6	2.8
Ø 16	5.0	2.7	1.3	7.5	0.8	5.5
Ø 18	5.0	2.7	1.3	7.5	0.8	5.5

Packing Methods of Lead Formed & Cut Capacitors and Kinking & Cut Capacitors

Capacitors are packed in primary cardboard carton using separators and then filled into appropriate Mother & Master carton for dispatch.