SME-BP Series

- Standard Bi-polar type
- Endurance : 2,000 hours at 85℃
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	-40 to +85℃
Rated Voltage Range	6.3 to 100Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current	I=0.06CV or 10μA, whichever is greater. (at 20℃ after 2 minutes) I=0.03CV or 3μA, whichever is greater. (at 20℃ after 5 minutes) Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)

Dissipation Factor (tan δ)

Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V
tan δ (Max.)	0.24	0.24	0.20	0.20	0.16	0.14	0.12	0.12	0.10

When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20℃, 120Hz)

Low Temperature Characteristics (Max. Impedance Ratio)

Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V
Z(-25℃)/Z(+20℃)	4	3	2	2	2	2	2	2	2
Z(-40℃)/Z(+20℃)	10	8	6	4	3	3	3	3	3

(at 120Hz)

Endurance

The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 hours at 85℃, however the polarization shall be reversed every 250 hours.

Rated voltage	6.3 to 16Vdc	25 to 100Vdc
Capacitance change	≦±25% of the initial value	≦±20% of the initial value
D.F. (tan δ)	≦150% of the initial specified value	
Leakage current	≦The initial specified value	

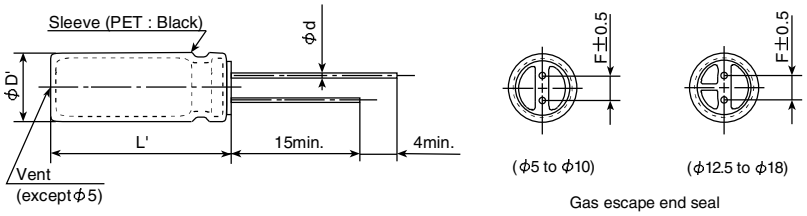
Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 85℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.

Rated voltage	6.3 to 16Vdc	25 to 100Vdc
Capacitance change	≦±25% of the initial value	≦±20% of the initial value
D.F. (tan δ)	≦150% of the initial specified value	
Leakage current	≦The initial specified value	

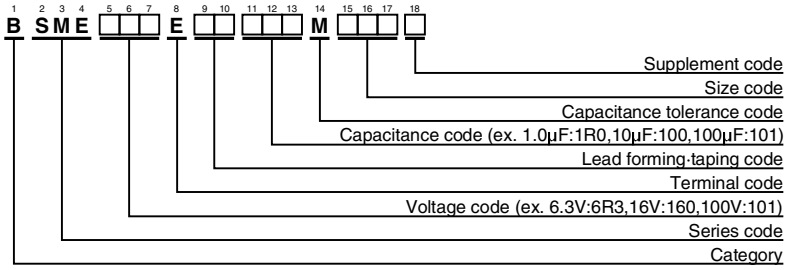
◆DIMENSIONS [mm]

●Terminal Code : E



φD	5	6.3	8	10	12.5	16	18
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φD'	φD+0.5max.						
L'	L+1.5max.						

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

SME-BP Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 85℃, 120Hz)	Part No.
6.3	33	5×11	0.24	64	BSME6R3E□□330ME11D
	47	5×11	0.24	76	BSME6R3E□□470ME11D
	100	6.3×11	0.24	125	BSME6R3E□□101MF11D
	220	8×11.5	0.24	215	BSME6R3E□□221MHB5D
	330	8×11.5	0.24	265	BSME6R3E□□331MHB5D
	470	10×12.5	0.24	370	BSME6R3E□□471MJC5S
	1,000	10×20	0.24	650	BSME6R3E□□102MJ20S
	2,200	12.5×25	0.26	1,160	BSME6R3E□□222MK25S
	3,300	16×25	0.28	1,570	BSME6R3E□□332ML25S
	4,700	16×31.5	0.30	2,020	BSME6R3E□□472MLN3S
	6,800	18×35.5	0.34	2,600	BSME6R3E□□682MMP1S
10	22	5×11	0.24	57	BSME100E□□220ME11D
	33	5×11	0.24	64	BSME100E□□330ME11D
	47	5×11	0.24	76	BSME100E□□470ME11D
	100	6.3×11	0.24	125	BSME100E□□101MF11D
	220	8×11.5	0.24	215	BSME100E□□221MHB5D
	330	10×16	0.24	345	BSME100E□□331MJ16S
	470	10×16	0.24	410	BSME100E□□471MJ16S
	1,000	12.5×20	0.24	720	BSME100E□□102MK20S
	2,200	16×25	0.26	1,280	BSME100E□□222ML25S
	3,300	16×31.5	0.28	1,690	BSME100E□□332MLN3S
	4,700	18×35.5	0.30	2,160	BSME100E□□472MMP1S
16	10	5×11	0.20	42	BSME160E□□100ME11D
	22	5×11	0.20	57	BSME160E□□220ME11D
	33	5×11	0.20	70	BSME160E□□330ME11D
	47	6.3×11	0.20	95	BSME160E□□470MF11D
	100	8×11.5	0.20	160	BSME160E□□101MHB5D
	220	10×12.5	0.20	275	BSME160E□□221MJC5S
	330	10×16	0.20	375	BSME160E□□331MJ16S
	470	10×20	0.20	485	BSME160E□□471MJ20S
	1,000	12.5×25	0.20	855	BSME160E□□102MK25S
	2,200	16×31.5	0.22	1,510	BSME160E□□222MLN3S
	3,300	18×35.5	0.24	1,980	BSME160E□□332MMP1S
25	10	5×11	0.20	42	BSME250E□□100ME11D
	22	6.3×11	0.20	65	BSME250E□□220MF11D
	33	6.3×11	0.20	80	BSME250E□□330MF11D
	47	6.3×11	0.20	95	BSME250E□□470MF11D
	100	8×11.5	0.20	160	BSME250E□□101MHB5D
	220	10×16	0.20	305	BSME250E□□221MJ16S
	330	12.5×20	0.20	450	BSME250E□□331MK20S
	470	12.5×20	0.20	540	BSME250E□□471MK20S
	1,000	16×25	0.20	950	BSME250E□□102ML25S
	2,200	18×35.5	0.22	1,620	BSME250E□□222MMP1S
35	4.7	5×11	0.16	34	BSME350E□□4R7ME11D
	10	5×11	0.16	43	BSME350E□□100ME11D
	22	6.3×11	0.16	73	BSME350E□□220MF11D
	33	8×11.5	0.16	100	BSME350E□□330MHB5D
	47	8×11.5	0.16	120	BSME350E□□470MHB5D

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 85℃, 120Hz)	Part No.
35	100	10×16	0.16	230	BSME350E□□101MJ16S
	220	12.5×20	0.16	410	BSME350E□□221MK20S
	330	12.5×20	0.16	505	BSME350E□□331MK20S
	470	12.5×25	0.16	655	BSME350E□□471MK25S
	1,000	16×31.5	0.16	1,140	BSME350E□□102MLN3S
50	1.0	5×11	0.14	17	BSME500E□□1R0ME11D
	2.2	5×11	0.14	25	BSME500E□□2R2ME11D
	3.3	5×11	0.14	27	BSME500E□□3R3ME11D
	4.7	5×11	0.14	34	BSME500E□□4R7ME11D
	10	6.3×11	0.14	52	BSME500E□□100MF11D
	22	8×11.5	0.14	89	BSME500E□□220MHB5D
	33	8×11.5	0.14	105	BSME500E□□330MHB5D
	47	10×12.5	0.14	150	BSME500E□□470MJC5S
	100	10×20	0.14	265	BSME500E□□101MJ20S
	220	12.5×25	0.14	480	BSME500E□□221MK25S
	330	16×25	0.14	650	BSME500E□□331ML25S
	470	16×31.5	0.14	835	BSME500E□□471MLN3S
63	3.3	5×11	0.12	28	BSME630E□□3R3ME11D
	4.7	6.3×11	0.12	34	BSME630E□□4R7MF11D
	10	6.3×11	0.12	57	BSME630E□□100MF11D
	22	8×11.5	0.12	95	BSME630E□□220MHB5D
	33	10×12.5	0.12	135	BSME630E□□330MJC5S
	47	10×16	0.12	180	BSME630E□□470MJ16S
	100	12.5×20	0.12	320	BSME630E□□101MK20S
	220	16×25	0.12	575	BSME630E□□221ML25S
	330	16×31.5	0.12	655	BSME630E□□331MLN3S
	470	18×35.5	0.12	965	BSME630E□□471MMP1S
80	2.2	5×11	0.12	29	BSME800E□□2R2ME11D
	3.3	6.3×11	0.12	39	BSME800E□□3R3MF11D
	4.7	6.3×11	0.12	47	BSME800E□□4R7MF11D
	10	8×11.5	0.12	65	BSME800E□□100MHB5D
	22	10×16	0.12	125	BSME800E□□220MJ16S
	33	10×16	0.12	150	BSME800E□□330MJ16S
	47	10×20	0.12	195	BSME800E□□470MJ20S
	100	12.5×25	0.12	350	BSME800E□□101MK25S
	220	16×31.5	0.12	615	BSME800E□□221MLN3S
	330	18×35.5	0.12	755	BSME800E□□331MMP1S
100	1.0	5×11	0.10	21	BSME101E□□1R0ME11D
	2.2	6.3×11	0.10	34	BSME101E□□2R2MF11D
	3.3	6.3×11	0.10	39	BSME101E□□3R3MF11D
	4.7	6.3×11	0.10	47	BSME101E□□4R7MF11D
	10	8×11.5	0.10	71	BSME101E□□100MHB5D
	22	10×16	0.10	135	BSME101E□□220MJ16S
	33	12.5×20	0.10	220	BSME101E□□330MK20S
	47	12.5×20	0.10	240	BSME101E□□470MK20S
	100	16×25	0.10	425	BSME101E□□101ML25S
	220	18×35.5	0.10	720	BSME101E□□221MMP1S

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	50	120	300	1k	10k	100k
1.0 to 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 to 47	0.75	1.00	1.25	1.50	1.75	1.80
100 to 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 to	0.85	1.00	1.03	1.05	1.08	1.08

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.