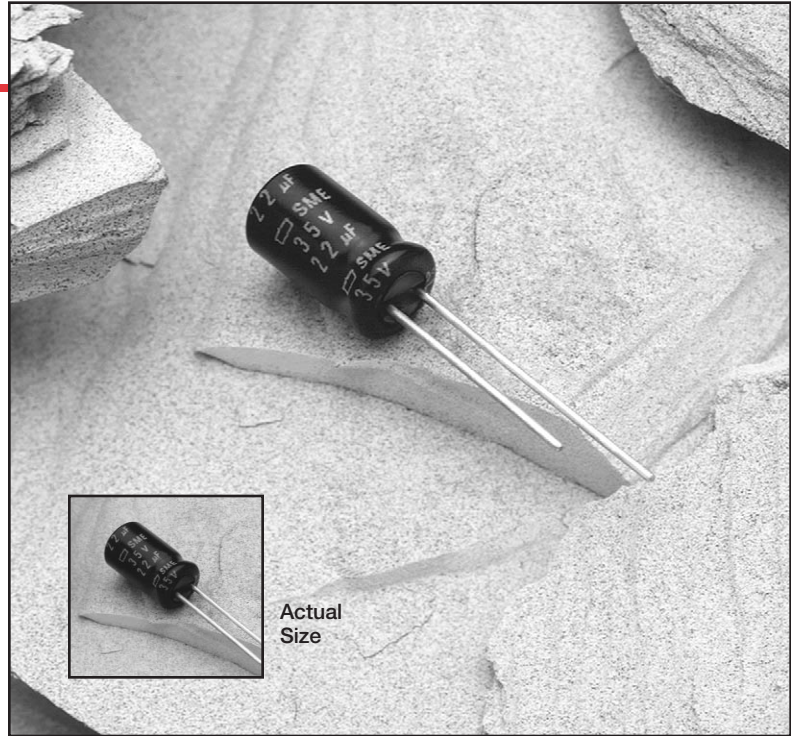


- **Miniature**
- **Bi-Polar**
- **Solvent Proof**
- **+85°C  
Maximum  
Temperature**



The SMEBP series capacitors are the bi-polar versions of the SME series, and are designed for use in circuits in which polarity is sometimes reversed or unknown. Please note that these capacitors cannot withstand an AC application in which the maximum ripple current is exceeded.

The SMEBP series capacitors were developed to withstand HCFC cleaning agents for five minutes by ultrasonic, vapor or immersion. This solvent proof design allows all circuit board components to be cleaned together, at the same time, without resorting to more expensive epoxy end-sealed capacitors. Refer to the Mini-Glossary for recommended cleaning conditions.

## Summary of Specifications

- **Radial lead terminals.**
- **Capacitance range: 0.47 to 6,800 $\mu$ F.**
- **Voltage range: 6.3 to 100VDC.**
- **Operating temperature range: -40°C to +85°C.**
- **Leakage current: 0.06CV or 10 $\mu$ A, whichever is greater, after 1 minute or 0.03CV or 3 $\mu$ A, whichever is greater, after 5 minutes at +20°C.**
- **Standard capacitance tolerance:  $\pm$  20%**
- **Nominal case size (D  $\times$  L): 5  $\times$  11mm to 18  $\times$  35.5mm.**
- **Rated lifetime: 2,000 hours at +85°C.**

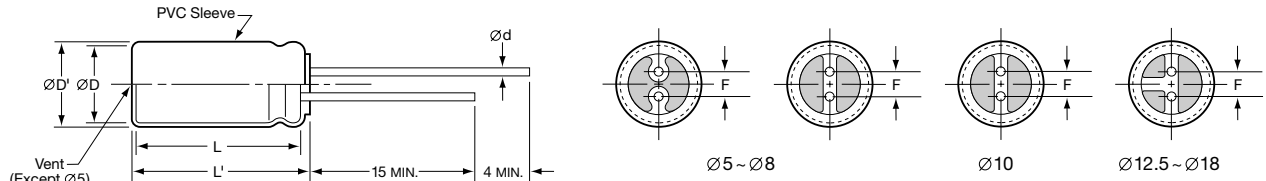


# SMEBP Series

## Diagram of Dimensions

### VB/Radial Lead

Unit: mm



Gas escape end seal for all case diameters.

For optional lead configurations and tape and ammo packaging, refer to the beginning of the Miniature section.

ØD	ØD' max.	L' max.	Ød	F ± 0.5
5	ØD + 0.5	L + 1.5	0.5	2.0
6.3	ØD + 0.5	L + 1.5	0.5	2.5
8	ØD + 0.5	L + 1.5	0.6	3.5
10, 12.5	ØD + 0.5	L + 1.5	0.6	5.0
16, 18	ØD + 0.5	L + 1.5	0.8	7.5

## Part Numbering System for SMEBP Series

When ordering, always specify complete catalog number for SMEBP Series.

**SMEBP 35 VB 22R M 6X11 LL**

- Lead Length: LL is Standard.
- Case Code: See Case Sizes in Tables.
- Capacitance Tolerance: M = ± 20%
- Capacitance Value: Expressed in Microfarads. The first two digits are significant figures, and the third digit indicates the number of zeros for capacitance of 100µF or more. R indicates the decimal point for capacitance less than 100µF (e.g. R22 = .22µF; 2R2 = 2.2µF; 22R = 22µF; 221 = 220µF; 222 = 2,200µF; 223 = 22,000µF).
- Lead Configuration: VB = Radial Lead Terminals.
- DC Rated Voltage: Expressed in Volts (e.g. 35 = 35WVDC).
- Series Name: Indicates Basic Capacitor Design.

## Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +85°C, 120Hz
6.3 Volts 8 Volts Surge	330	SMEBP6.3VB331M8X11LL	8 × 11.5	1.205	265
	470	SMEBP6.3VB471M10X12LL	10 × 12.5	0.846	370
	1,000	SMEBP6.3VB102M10X20LL	10 × 20	0.398	650
	2,200	SMEBP6.3VB222M12X25LL	12.5 × 25	0.196	1,160
	3,300	SMEBP6.3VB332M16X25LL	16 × 25	0.141	1,570
	4,700	SMEBP6.3VB472M16X31LL	16 × 31.5	0.106	2,020
6,800	SMEBP6.3VB682M18X35LL	18 × 35.5	0.083	2,600	
10 Volts 13 Volts Surge	47	SMEBP10VB47RM5X11LL	5 × 11	8.464	76
	100	SMEBP10VB101M6X11LL	6.3 × 11	3.978	125
	220	SMEBP10VB221M8X11LL	8 × 11.5	1.808	215
	330	SMEBP10VB331M10X16LL	10 × 16	1.205	345

\*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.

# SMEBP Series

## Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +85°C, 120Hz
<b>10 Volts</b> 13 Volts Surge	470	SMEBP10VB471M10X16LL	10 × 16	0.846	410
	1,000	SMEBP10VB102M12X20LL	12.5 × 20	0.398	720
	2,200	SMEBP10VB222M16X25LL	16 × 25	0.196	1,280
	3,300	SMEBP10VB332M16X31LL	16 × 31.5	0.141	1,690
	4,700	SMEBP10VB472M18X35LL	18 × 35.5	0.106	2,160
<b>16 Volts</b> 20 Volts Surge	22	SMEBP16VB222RM5X11LL	5 × 11	15.068	57
	33	SMEBP16VB333RM5X11LL	5 × 11	10.045	70
	220	SMEBP16VB221M10X12LL	10 × 12.5	1.507	275
	330	SMEBP16VB331M10X16LL	10 × 16	1.005	375
	470	SMEBP16VB471M10X20LL	10 × 20	0.705	485
	1,000	SMEBP16VB102M12X25LL	12.5 × 25	0.332	855
	2,200	SMEBP16VB222M16X31LL	16 × 31.5	0.166	1,510
3,300	SMEBP16VB332M18X35LL	18 × 35.5	0.121	1,980	
<b>25 Volts</b> 32 Volts Surge	33	SMEBP25VB333RM6X11LL	6.3 × 11	10.045	80
	47	SMEBP25VB473RM6X11LL	6.3 × 11	7.053	95
	100	SMEBP25VB101M8X11LL	8 × 11.5	3.315	160
	220	SMEBP25VB221M10X16LL	10 × 16	1.507	305
	330	SMEBP25VB331M12X20LL	12.5 × 20	1.005	450
	470	SMEBP25VB471M12X20LL	12.5 × 20	0.705	540
	1,000	SMEBP25VB102M16X25LL	16 × 25	0.332	950
	2,200	SMEBP25VB222M18X35LL	18 × 35.5	0.166	1,620
<b>35 Volts</b> 44 Volts Surge	10	SMEBP35VB10RM5X11LL	5 × 11	26.52	43
	22	SMEBP35VB22RM6X11LL	6.3 × 11	12.055	73
	47	SMEBP35VB47RM8X11LL	8 × 11.5	5.643	120
	100	SMEBP35VB101M10X16LL	10 × 16	2.652	230
	220	SMEBP35VB221M12X20LL	12.5 × 20	1.205	410
	330	SMEBP35VB331M12X20LL	12.5 × 20	0.804	505
	470	SMEBP35VB471M12X25LL	12.5 × 25	0.564	655
	1,000	SMEBP35VB102M16X31LL	16 × 31.5	0.265	1,140
<b>50 Volts</b> 63 Volts Surge	0.47	SMEBP50VBR47M5X11LL	5 × 11	493.723	11
	1.0	SMEBP50VB1R0M5X11LL	5 × 11	232.05	17
	2.2	SMEBP50VB2R2M5X11LL	5 × 11	105.477	25
	3.3	SMEBP50VB3R3M5X11LL	5 × 11	70.318	27
	4.7	SMEBP50VB4R7M5X11LL	5 × 11	49.372	34
	10	SMEBP50VB10RM6X11LL	6.3 × 11	23.205	52
	22	SMEBP50VB22RM8X11LL	8 × 11.5	10.548	89
	33	SMEBP50VB33RM8X11LL	8 × 11.5	7.032	105
	47	SMEBP50VB47RM10X12LL	10 × 12.5	4.937	150
	100	SMEBP50VB101M10X20LL	10 × 20	2.321	265
	220	SMEBP50VB221M12X25LL	12.5 × 25	1.055	480
	330	SMEBP50VB331M16X25LL	16 × 25	0.703	650
	470	SMEBP50VB471M16X31LL	16 × 31.5	0.494	835
<b>63 Volts</b> 79 Volts Surge	3.3	SMEBP63VB3R3M5X11LL	5 × 11	60.273	28
	4.7	SMEBP63VB4R7M6X11LL	6.3 × 11	42.319	34
	10	SMEBP63VB10RM6X11LL	6.3 × 11	19.89	57
	22	SMEBP63VB22RM8X11LL	8 × 11.5	9.041	96
	33	SMEBP63VB33RM10X12LL	10 × 12.5	6.027	135
	47	SMEBP63VB47RM10X16LL	10 × 16	4.232	180
	100	SMEBP63VB101M12X20LL	12.5 × 20	1.989	320
	220	SMEBP63VB221M16X25LL	16 × 25	0.904	575
	330	SMEBP63VB331M16X31LL	16 × 31.5	0.603	755
	470	SMEBP63VB471M18X35LL	18 × 35.5	0.423	965

\*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.

# SMEBP Series

## Standard Voltage Ratings - VB/Radial Lead

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (mA rms) at +85°C, 120Hz
<b>80 Volts</b> 100 Volts Surge	2.2	SMEBP80VB2R2M5X11LL	5 × 11	90.409	29
	22	SMEBP80VB22RM10X16LL	10 × 16	9.041	125
	33	SMEBP80VB33RM10X16LL	10 × 16	6.027	150
	47	SMEBP80VB47RM10X20LL	10 × 20	4.232	195
	100	SMEBP80VB101M12X25LL	12.5 × 25	1.989	350
	220	SMEBP80VB221M16X31LL	16 × 31.5	0.904	615
	330	SMEBP80VB331M18X35LL	18 × 35.5	0.603	755
<b>100 Volts</b> 125 Volts Surge	0.47	SMEBP100VBR47M5X11LL	5 × 11	352.66	14
	1.0	SMEBP100VB1R0M5X11LL	5 × 11	165.75	21
	2.2	SMEBP100VB2R2M6X11LL	6.3 × 11	75.341	34
	3.3	SMEBP100VB3R3M6X11LL	6.3 × 11	50.227	39
	4.7	SMEBP100VB4R7M6X11LL	6.3 × 11	35.266	47
	10	SMEBP100VB10RM8X11LL	8 × 11.5	16.575	71
	22	SMEBP100VB22RM10X16LL	10 × 16	7.534	135
	33	SMEBP100VB33RM12X20LL	12.5 × 20	5.023	220
	47	SMEBP100VB47RM12X20LL	12.5 × 20	3.527	240
	100	SMEBP100VB101M16X25LL	16 × 25	1.658	425
	220	SMEBP100VB221M18X35LL	18 × 35.5	0.753	720

\*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.