

# ZB Series

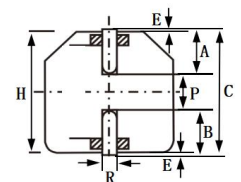
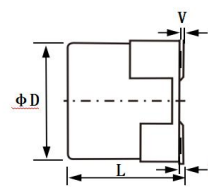
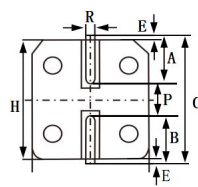
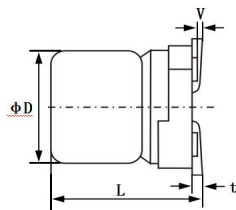
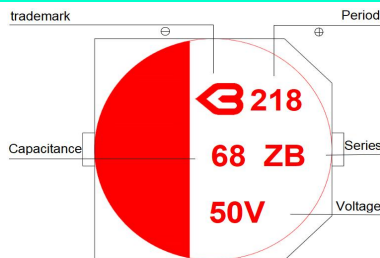
- Low ESR
- High Voltage, Long Life.
- 125°C,2,000~4,000hrs.
- RoHS compliant



## ◆ Specifications

Items	Characteristics		
Category	-55 ~ +125℃		
Temperature Range	16 ~ 250 V		
Rated Voltage Range	±20%(M) (at 20℃,120Hz)		
Capacitance tolerance	±20%(M) (at 20℃,120Hz)		
Leakage Current	≤0.05CV or 100μA (The bigger) After 2 minutes applied for rated voltage at 20℃, less than or equal to the specified value.		
Dissipation Factor	Less than or equal to the specified		
Low Temperature Characteristics (Max.Impedance Ratio)	Z(-55℃)/Z(+20℃)	≅ 0.75 to 1.5	(100KHz)
	Z(+125℃)/Z(+20℃)	≅ 0.75 to 2.0	
Endurance	ΦD ≅ Φ6.3=2,000hrs, ΦD ≅ Φ8=4,000hrs; The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 to 4,000 hours at 125℃. ΦD ≅ Φ6.3=2,000hrs, ΦD ≅ Φ8=4,000hrs.		
	Appearance	No significant damage	
	Capacitance change	≅ ±30% of the initial value	
	D.F.(tanδ)	≅ 200% of the specified value	
	ESR	≅ 200% of the specified value	
	Leakage current	≅ The specified value	
Damp Heat (Steady State)	The specifications listed below shall be met when the capacitors are restored to 20℃ after the rated voltage is applied for 1000 hours at 60℃, 90%~ 95% RH.		
	Appearance	No significant damage	
	Capacitance change	≅ ±30% of the initial value	
	D.F.(tanδ)	≅ 200% of the specified value	
	ESR	≅ 200% of the specified value	
	Leakage current	≅ The specified value	
(Surge Voltage)	Surge Voltage=Rated voltage * 1.15(V) The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 15~35℃ for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30seconds		
	Appearance	No significant damage	
	Capacitance change	≅ ±30% of the initial value	
	D.F.(tanδ)	≅ 200% of the specified value	
	ESR	≅ 200% of the specified value	
	Leakage current	≅ The specified value	

## ◆ Dimensions (mm)



(Unit:mm)

Vibration resistant structure

Size	ΦD	L	W	H	C	R	P
6.3*7.7	6.3	7.7	6.6	6.6	7.3	0.5~0.8	2.1
8*10.5	8	10.5	8.3	8.3	9	0.7~1.1	3.2
10*10.5	10	10.5	10.3	10.3	11	0.7~1.3	4.6
10*12.5	10	12.5	10.3	10.3	11	0.7~1.3	4.6

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## ◆ Standard Ratings

Rated voltage (V)	Rated capacitance( $\mu\text{F}$ )	Case size $\Phi\text{D}^*\text{L}$ (mm)	Leakage current ( $\mu\text{A}$ )	ESR(m $\Omega$ ) at 20 $^{\circ}\text{C}$ , 100 KHz	Rated ripple current (mA <sub>rms</sub> /125 $^{\circ}\text{C}$ /100kHz)	$\tan\delta$ (120Hz)
16	47	5*5.8	7.5	50	1000	0.16
	100	5*5.8	16.0	40	1000	0.16
	220	6.3*7.7	35.2	20	1500	0.16
	330	8*9.7	52.8	18	1600	0.16
	470	8*10.5	75.2	15	1800	0.16
25	47	6.3*5.8	11.8	50	1000	0.12
	100	6.3*5.8	25.0	30	1000	0.12
	100	6.3*7.7	25.0	30	1200	0.12
	220	6.3*7.7	55.0	25	1500	0.12
	220	8*10.5	55.0	20	1600	0.12
	330	10*10.5	82.5	20	1800	0.12
35	47	6.3*5.8	16.5	40	1000	0.12
	100	6.3*7.7	35.0	30	1200	0.12
	100	8*10.5	35.0	30	1300	0.12
	220	8*12.5	77.0	25	1500	0.12
	330	10*10.5	115.5	20	1800	0.12
	470	10*12.5	164.5	18	2000	0.12
50	10	6.3*5.8	5.0	80	500	0.10
	22	6.3*5.8	11.0	50	1000	0.10
	47	8*10.5	23.5	30	1200	0.10
	100	8*10.5	50.0	30	1500	0.10
	220	10*10.5	110.0	20	2000	0.10
63	22	6.3*7.7	13.9	50	1000	0.08
	47	8*10.5	29.6	30	1100	0.08
	100	10*12.5	63.0	20	1200	0.08
80	47	10*10.5	37.6	35	1000	0.08
	68	10*12.5	54.4	25	1200	0.08
	100	10*12.5	80.0	25	1300	0.08
100	22	8*12.5	22.0	40	1000	0.08
	33	10*10.5	33.0	40	1100	0.08
	47	10*12.5	47.0	35	1200	0.08
160	10	10*10.5	16.0	100	1200	0.08
250	6.8	10*12.5	17.0	200	500	0.08
Frequency(Hz)		100Hz $\leq$ f<1kHz	1kHz $\leq$ f<10kHz	10kHz $\leq$ f<100kHz	100kHz $\leq$ f	
4.7<C $\leq$ 33		0.05	0.32	0.67	1.00	
33<C		0.10	0.35	0.70	1.00	