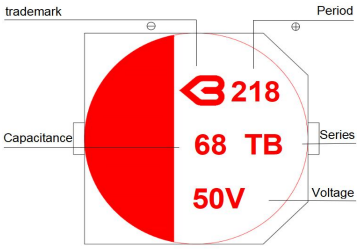
TB Series

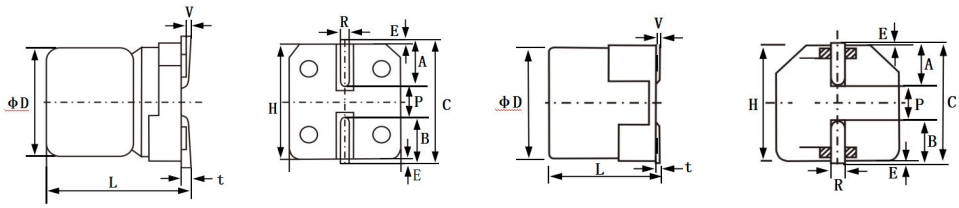
- High reliability hybrid capacitors for automotive equipment electronics
- Endurance with ripple current： 2000~4000 hours at 125℃
- High Voltage：16~250V
- RoHS compliant
- Halogen Free
- AEC-Q200 compliant

◆ Specifications

Items	Characteristics		
Category Temperture Range	-55 ~ +125℃		
Rated Voltage Range	16 ~ 250 V		
Capacitance tolerance	±20%(M) (at 20℃,120Hz)		
Leakage Current	I≤0.01CV or 10μA（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 Temperture Characteristics (Max.Impedance Ratio)	Z(-55℃)/Z(+20℃)	≦ 0.75 to 1.5	(100KHz)
	Z+125℃)/Z(+20℃)	≦ 0.75 to 2.0	
Endurence	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°C 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 * 1.25(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 aprotective 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
5.0*5.8	5	5.8	5.3	6.5	5.3	0.5~0.8	1.4
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

TB Series

◆ Standard Ratings

Rated voltage (V)	Rated capacitance(μF)	Case size ΦD*L(mm)	Leakage carrent (μA)	ESR(mΩ) at 20℃,100 KHz	Rated ripple current (mArms/125℃/100kHz)	tanδ （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	1400	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	1400	0.12
	220	8*12.5	77.0	20	1500	0.12
	220	10*10.5	77.0	20	2000	0.12
	330	10*10.5	115.5	20	2200	0.12
	470	10*12.5	164.5	18	2400	0.12
50	10	6.3*5.8	5.0	80	500	0.10
	22	6.3*5.8	11.0	50	800	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	480	500	0.08

◆ Rated Ripple Current Coefficient

Frequency(Hz)	100Hz≤f＜1kHz	1kHz≤f＜10kHz	10kHz≤f＜100kHz	100kHz≤f
4.7＜C≦33	0.05	0.32	0.67	1.00
33＜C	0.10	0.35	0.70	1.00