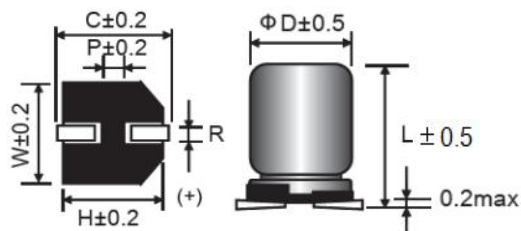
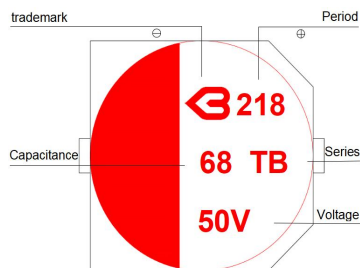


TB Series

- Low ESR ● High Voltage, Long Life. ● 125°C, 2,000~4,000hrs. ● RoHS compliant
- AEC-Q200 qualified

**◆ Specifications**

Items	Characteristics		
Category	-55 ~ +125℃		
Temperature Range			
Rated Voltage Range	16 ~ 250 V		
Capacitance tolerance	±20%(M) (at 20℃,120Hz)		
Leakage Current	≤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 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 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)

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	1.5
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(μ F)	Case size Φ D*L(mm)	Leakage current (μ A)	ESR($m\Omega$) at 20℃, 100 KHz	Rated ripple current (mA _{rms} /125℃/100kHz)	$\tan\delta$ (120Hz)
16	120	6.3*7.7	19.2	40	1100	0.16
	270	8*10.5	43.2	26	1500	0.16
	470	10*10.5	75.2	21	2000	0.16
	560	10*12.5	89.6	15	2300	0.16
25	22	5.0*5.8	5.5	80	900	0.14
	33	5.0*5.8	8.3	80	900	0.14
	68	6.3*7.7	17.0	45	1000	0.12
	150	8*10.5	37.5	27	1300	0.12
	270	10*10.5	67.5	22	1500	0.12
	330	10*10.5	82.5	20	1500	0.12
35	10	5.0*5.8	3.5	100	900	0.12
	22	5.0*5.8	7.7	100	900	0.12
	68	6.3*7.7	23.8	60	900	0.10
	100	8*10.5	35.0	30	1200	0.10
	150	8*10.5	52.5	28	1320	0.10
	220	10*10.5	77.0	22	1600	0.10
50	10	5.0*5.8	5.0	120	750	0.10
	33	6.3*7.7	16.5	75	760	0.10
	47	8*10.5	23.5	48	1020	0.10
	56	8*10.5	28.0	45	1040	0.10
	100	10*10.5	50.0	30	1500	0.10
63	10	6.3*5.8	10.0	120	578	0.08
	22	6.3*7.7	13.9	80	868	0.08
	33	8*10.5	20.8	42	1000	0.08
	33	10*10.5	20.8	32	1200	0.08
	47	8*10.5	29.6	42	980	0.08
	56	10*10.5	35.3	32	1050	0.08
80	12	10*10.5	10.0	70	900	0.08
	15	10*10.5	12.0	70	900	0.08
	18	10*12.5	14.4	50	1100	0.08
100	10	10*10.5	10.0	80	800	0.08
	12	10*10.5	12.0	80	800	0.08
	15	10*12.5	15.0	60	1000	0.08
160	10	10*10.5	16.0	90	700	0.08
250	6.8	10*12.5	17.0	485	240	0.08

◆ Rated Ripple Current Coefficient

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