

TLB Series

• 105°C 7,000Hrs assured.

- Non-solvent proof.
- Long Life.
- For SMPS, Inverter.
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.



SPECIFICATIONS

Item	Characteristics						
Rated Voltage Range	160 ~ 500 V _{DC}						
Operating Temperature Range	-25 ~ +105°C						
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)						
Leakage Current	I = 0.02CV(µA) or 3mA, whichever is smaller. Where, I: Max. Leakage current(µA), C:Nominal capacitance(µF), V:Rated voltage(V _{DC}) (at 20°C, 5 minutes)						
※Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>160 ~ 500</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.20</td> </tr> </table> (at 20°C, 120Hz)	Rated voltage(V _{DC})	160 ~ 500	Tanδ(Max.)	0.20		
Rated voltage(V _{DC})	160 ~ 500						
Tanδ(Max.)	0.20						
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>160 ~ 400</td> <td>450 ~ 500</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>8</td> </tr> </table> (at 120Hz)	Rated voltage(V _{DC})	160 ~ 400	450 ~ 500	Z(-25°C)/Z(20°C)	4	8
Rated voltage(V _{DC})	160 ~ 400	450 ~ 500					
Z(-25°C)/Z(20°C)	4	8					
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 7,000 hours at 105°C. Capacitance change ≤ ±25% of the initial value Tanδ ≤ 300% 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°C after the exposing them at 105°C for 1,000 hours without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≤ ±20% of the initial value Tanδ ≤ 150% of the initial specified value Leakage current ≤ The initial specified value						
Others	Satisfied characteristics KS C IEC 60384-4						

※ For capacitors with CV products > 100,000 higher Tanδ value may apply.
When the capacitance exceeds 1,000µF, 0.01 shall be added every 1,000µF increase.

RATED RIPPLE CURRENT

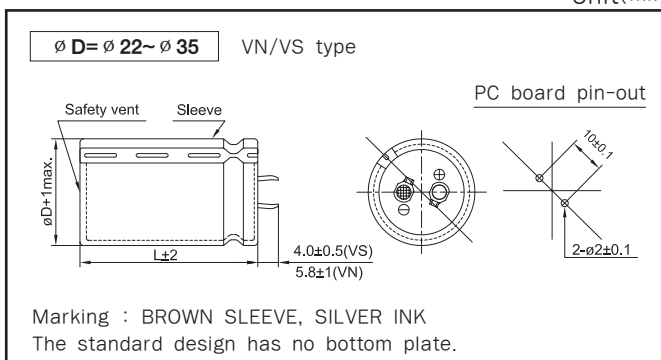
When capacitors are operated in any other conditions at 120Hz the maximum ripple current must be multiplied by the figure shown in the table.

Frequency multiplying factor

V _{DC} \ Freq.(Hz)	60	120	300	1k	10k~
160~250V _{DC}	0.81	1.00	1.17	1.32	1.45
350~500V _{DC}	0.77	1.00	1.16	1.30	1.41

DIMENSIONS OF TLB Series

Unit(mm)



RATINGS OF TLB Series

Vbc μF / ∅ D	160				200				250			
	22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
220					22 × 25 0.90				22 × 30 0.95			
270					22 × 30 1.05				22 × 35 1.08	25.4 × 25 1.05		
330	22 × 25 1.11				22 × 30 1.16	25.4 × 25 1.16			22 × 40 1.22	25.4 × 30 1.19		
390	22 × 30 1.26				22 × 35 1.29	25.4 × 30 1.29			22 × 45 1.36	25.4 × 35 1.35	30 × 25 1.32	
470	22 × 30 1.39	25.4 × 25 1.38			22 × 40 1.46	25.4 × 30 1.42	30 × 25 1.45		22 × 50 1.49	25.4 × 40 1.52	30 × 30 1.49	
560	22 × 35 1.55	25.4 × 30 1.55			22 × 45 1.63	25.4 × 35 1.62	30 × 30 1.62			25.4 × 45 1.70	30 × 35 1.69	
680	22 × 40 1.75	25.4 × 35 1.78	30 × 25 1.74			25.4 × 40 1.83	30 × 30 1.79			25.4 × 50 1.91	30 × 40 1.93	35 × 30 1.90
820	22 × 50 1.97	25.4 × 40 2.01	30 × 30 1.96			25.4 × 45 2.06	30 × 35 2.04				30 × 45 2.19	35 × 35 2.13
1,000		25.4 × 45 2.27	30 × 35 2.26				30 × 45 2.42	35 × 30 2.30				35 × 40 2.46
1,200		25.4 × 50 2.54	30 × 40 2.56	35 × 30 2.52			30 × 50 2.71	35 × 45 2.70				35 × 50 2.86
1,500			30 × 45 2.96	35 × 35 2.89				35 × 45 3.11				
1,800			30 × 50 3.32	35 × 40 3.30				35 × 50 3.50				
2,200				35 × 50 3.87								

Vbc μF / ∅ D	350				400				450			
	22	25.4	30	35	22	25.4	30	35	22	25.4	30	35
47									22 × 25 0.46			
56									22 × 30 0.52			
68					22 × 25 0.55				22 × 30 0.58	25.4 × 25 0.58		
82					22 × 30 0.63				22 × 35 0.65	25.4 × 30 0.65		
100	22 × 25 0.67				22 × 30 0.70	25.4 × 25 0.70			22 × 40 0.74	25.4 × 30 0.72	30 × 25 0.73	
120	22 × 30 0.77	25.4 × 25 0.76			22 × 35 0.79	25.4 × 30 0.79			22 × 45 0.83	25.4 × 35 0.82	30 × 30 0.82	
150	22 × 35 0.88	25.4 × 30 0.88			22 × 40 0.90	25.4 × 30 0.88	30 × 25 0.90			25.4 × 40 0.94	30 × 35 0.96	
180	22 × 40 0.99	25.4 × 30 0.96	30 × 25 0.98		22 × 45 0.99	25.4 × 35 1.01	30 × 30 1.01			25.4 × 45 1.06	30 × 35 1.05	35 × 30 1.07
220	22 × 45 1.12	25.4 × 35 1.11	30 × 30 1.11			25.4 × 40 1.14	30 × 35 1.16				30 × 40 1.20	35 × 35 1.21
270		25.4 × 40 1.26	30 × 35 1.28			25.4 × 50 1.32	30 × 40 1.33	35 × 30 1.31			30 × 50 1.41	35 × 40 1.40
330		25.4 × 45 1.40	30 × 35 1.42	35 × 30 1.45			30 × 45 1.52	35 × 35 1.48				35 × 45 1.60
390			30 × 40 1.60	35 × 35 1.61			30 × 50 1.69	35 × 40 1.68				35 × 50 1.79
470			30 × 50 1.86	35 × 40 1.85				35 × 45 1.91				
560				35 × 40 2.02				35 × 50 2.14				
680				35 × 50 2.36								

Case Size ∅D×L (mm)
 Rated Ripple Current (Arms/105°C, 120Hz)

RATINGS OF TLB Series

μF	V _{DC} ϕ D	500			
		22	25.4	30	35
56	22 × 35 0.33				
68	22 × 40 0.39	25.4 × 30 0.37			
82	22 × 45 0.45	25.4 × 35 0.44			
100	22 × 50 0.52	25.4 × 40 0.51	30 × 30 0.50		
120		25.4 × 45 0.59	30 × 35 0.58		
150		25.4 × 50 0.69	30 × 40 0.69	35 × 30 0.67	
180			30 × 45 0.80	35 × 35 0.79	
220			30 × 50 0.92	35 × 40 0.92	
270			30 × 60 1.11	35 × 50 1.12	
330		Case Size ϕ D × L (mm) →		35 × 60	
		Rated Ripple Current (Arms/105°C, 120Hz) →		1.34	