

TLH Series

• 105°C 3,000Hrs assured.

- Non-solvent proof.
- Downsized.
- For SMPS, Inverter.
- RoHS compliant.
- Halogen-free capacitors are also available.



SPECIFICATIONS

Item	Characteristics								
Rated Voltage Range	160 ~ 550 V _{DC}								
Operating Temperature Range	-25 ~ +105°C								
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)								
Leakage Current	I=3√CV or 3mA, whichever is smaller. Where, I:Leakage Current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, 5minutes)								
※ Dissipation Factor(Tanδ)	<table><tr><td>Rated voltage(V_{DC})</td><td>160~400</td><td>450~550</td></tr><tr><td>Tanδ(Max.)</td><td>0.15</td><td>0.20</td></tr></table> (at 20°C, 120Hz)			Rated voltage(V _{DC})	160~400	450~550	Tanδ(Max.)	0.15	0.20
Rated voltage(V _{DC})	160~400	450~550							
Tanδ(Max.)	0.15	0.20							
Temperature Characteristics (Max. Impedance ratio)	<table><tr><td>Rated voltage(V_{DC})</td><td>160~400</td><td>450~550</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	450~550	Z(-25°C)/Z(20°C)	4	8
Rated voltage(V _{DC})	160~400	450~550							
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 with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 3,000 hours at 105°C Capacitance change ≤ ±20% of the initial value Tanδ ≤ 200% 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 ≤ 200% 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

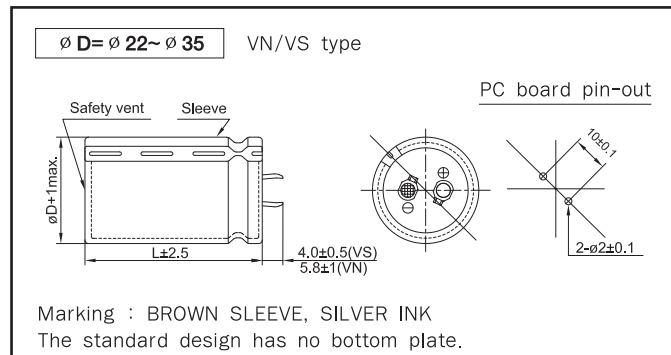
When capacitor are operated in any other condition at 120Hz, the maximum ripple current must be multiplied by the figure shown in the table.

Frequency multiplying factor

V _{DC} \ Freq.(Hz)	60	120	300	1k	10k~
160~250	0.81	1.00	1.17	1.32	1.45
315~500	0.77	1.00	1.16	1.30	1.41

DIMENSIONS OF TLH Series

Unit(mm)



RATINGS OF TLH Series

V _{DC}	Capacitance (μF)	øD×L(mm)	Rated Ripple Current (Arms/105°C, 120Hz)
160	1,200	30 × 25	2.74
	1,500	30 × 30	3.10
		35 × 25	3.25
	1,800	30 × 35	3.47
		35 × 30	3.61
	2,200	30 × 40	3.95
		35 × 30	4.00
	2,700	30 × 45	4.49
		35 × 35	4.51
	3,300	30 × 50	5.04
		35 × 40	5.16
	3,900	35 × 50	5.87
200	820	30 × 25	2.25
	1,000	30 × 30	2.52
	1,200	30 × 30	2.76
		35 × 25	2.91
	1,500	30 × 35	3.16
		35 × 30	3.31
	1,800	30 × 40	3.57
		35 × 35	3.68
	2,200	30 × 50	4.11
		35 × 40	4.21
	2,700	35 × 45	4.79
	3,300	35 × 50	5.40
250	680	30 × 25	2.06
	820	30 × 30	2.28
		35 × 25	2.40
	1,000	30 × 35	2.58
		35 × 30	2.69
	1,200	30 × 40	2.91
		35 × 30	2.96
	1,500	30 × 45	3.34
		35 × 35	3.35
	1,800	35 × 40	3.81
	2,200	35 × 50	4.40
315	390	30 × 25	1.55
	470	30 × 30	1.72
	560	30 × 30	1.89
		35 × 25	1.99
	680	30 × 35	2.13
		35 × 30	2.23
	820	30 × 40	2.40
		35 × 30	2.42
	1,000	30 × 45	2.73
		35 × 35	2.74
	1,200	35 × 40	3.10
	1,500	35 × 45	3.56

V _{DC}	Capacitance (μF)	øD×L(mm)	Rated Ripple Current (Arms/105°C, 120Hz)
400	330	30 × 25	1.43
	390	30 × 30	1.58
	470	30 × 35	1.77
		35 × 25	1.81
	560	30 × 40	1.99
		35 × 30	2.02
	680	30 × 45	2.25
		35 × 35	2.26
	820	30 × 50	2.53
		35 × 40	2.57
	1,000	35 × 45	2.90
	1,200	35 × 50	3.24
450	220	30 × 25	1.17
	270	30 × 30	1.31
	330	30 × 30	1.44
		35 × 25	1.51
	390	30 × 35	1.64
		35 × 30	1.67
	470	30 × 40	1.81
		35 × 30	1.83
	560	30 × 45	2.03
		35 × 35	2.04
	680	35 × 40	2.26
	820	35 × 50	2.68
500	120	30 × 30	0.67
	150	30 × 35	0.80
	180	30 × 40	0.93
		35 × 30	0.91
	220	30 × 45	1.08
		35 × 35	1.06
	270	30 × 50	1.14
		35 × 40	1.25
	330	30 × 60	1.52
		35 × 45	1.45
	390	35 × 50	1.50
	470	35 × 60	1.79
550	120	30 × 35	0.60
	150	30 × 40	0.78
	180	30 × 45	0.88
		35 × 35	0.82
	220	30 × 50	0.99
		35 × 40	1.03
	270	30 × 60	1.05
		35 × 50	1.05
	330	30 × 70	1.11
		35 × 55	1.16
	390	35 × 60	1.25
	470	35 × 70	1.65