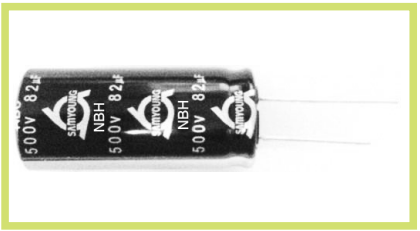
NBH Series

• 105℃ 20,000Hrs assured.

- Non-solvent proof
- High Ripple and Long Life, Low Temp.
- For SMPS, IP-Board, Adaptor, LED Lighting
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.

NBL → NBH

High Ripple

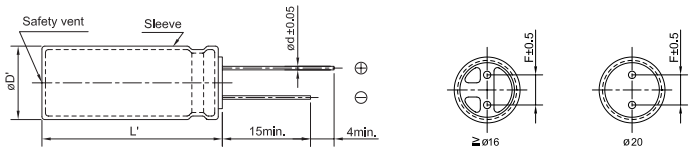


SPECIFICATIONS

Item	Characteristics
Rated Voltage Range	160～500 V_{DC}
Operating Temperature Range	-40～+105℃
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)
Leakage Current	C·V \ Time: ≤ 1000: After 1 minute I=0.1CV+40, After 5 minutes I=0.03CV+15; 〉1000: After 1 minute I=0.04CV+100, After 5 minutes I=0.02CV+25. Where, I:Max. Leakage current(μA) C:Nominal capacitance(μF) V:Rated voltage(V_{DC}) (at 20℃)
Dissipation Factor(Tanδ)	Rated Voltage(V_{DC}): 160～250 / 350～500; Tanδ(Max.): 0.20 / 0.24 (at 20℃, 120Hz)
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(V_{DC}): 160～500; Z(-25℃)/Z(20℃): 3; Z(-40℃)/Z(20℃): 6 (at 120Hz)
Load Life	The following specifcations shall be satisfied when the capacitors are restored to 20℃ after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 20,000 hours at 105℃. 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℃ after exposing them for 1,000 hours at 105℃ 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 ≤ 500% of the initial specified value
Others	Satisfied characteristics KS C IEC 60384-4

DIMENSIONS OF NBH Series

Unit(mm)



Marking : DARK BLUE SLEEVE, SILVER INK

øD	16	18	20	22
ød	0.8	0.8	0.8	1.0
F	7.5	7.5	7.5	10.0
øD'	øD+0.5 max.			
L'	L+2.0 max.			

RATINGS OF NBH Series

WVDC	160		200		250		350	
Items / μF	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)
68							16×31.5	685
82			16×20	678			18×25	756
100			16×25	789	16×25	789	18×31.5	899
120			16×25	864	16×31.5	884	18×35.5	1,016
150	16×25	908	16×31.5	894	16×35.5	992	18×40	1,191
180	16×25	980	16×35.5	1,046	18×31.5	1,113	18×45	1,353
220	16×31.5	1,065	18×31.5	1,210	18×35.5	1,233		
	18×25	1,065						
270	16×35.5	1,210	18×40	1,419				
330	18×31.5	1,354	18×45	1,529				
470	18×40	1,789						

WVDC	400		420		450		500	
Items / μF	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)
33			16×20	380	16×25	397	16×31.5	418
39			16×25	440	16×31.5	465	16×35.5	477
47	16×25	528	16×25	495	16×31.5	526	18×31.5	515
68	16×35.5	690	18×31.5	638	18×31.5	638	18×40	693
82	16×40	847	16×40	682	18×35.5	715	18×45	754
100	18×35.5	962	18×35.5	847	18×40	873	22×35	820
120	18×40	1,100	18×45	990	18×50	1,000	22×45	950
150	18×50	1,300					22×50	1,030

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz) / Cap.(μF)	120	1k	10k	50k	100k
33~82	1.00	1.75	2.25	2.35	2.50
100~470	1.00	1.67	2.05	2.15	2.25