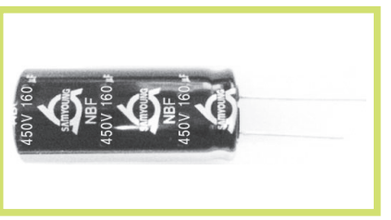
NBF Series

• 105℃ 12,000Hrs assured.

- Non-solvent proof
- High Ripple, Long Life, Low Temp.
- Suitable to fit for automotive equipment
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.

NBC → NBF

High Ripple, Downsized

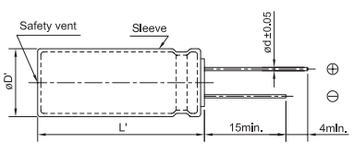


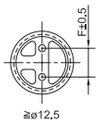
SPECIFICATIONS

Item	Characteristics
Rated Voltage Range	450～500
Operating Temperature Range	-40～+105℃
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)
Leakage Current	C·V \ Time: After 1 minute / After 5 minutes ≤ 1000: I=0.1CV+40 / I=0.03CV+15 〉1000: I=0.04CV+100 / 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}): 450～500 Tanδ(Max.): 0.24 (at 20℃, 120Hz)
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(V_{DC}): 450～500 Z(-25℃)/Z(20℃): 3 Z(-40℃)/Z(20℃): 6 (at 120Hz)
Load Life	The following specifcation sshall be satisfied when the capacitors are restored to 20℃ after the rated voltage with the rated ripple current is applied (the peak volrage shall not exceed the rated voltage) for 12,000 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 then 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 NBF Series

Unit(mm)





Marking : DARK BLUE SLEEVE, SILVER INK

øD	16	18
ød	0.8	0.8
F	7.5	7.5
øD'	øD+0.5 max.	
L'	L+2.0 max.	

RATINGS OF NBF Series

VDC	Capacitance (μF)	ØD×L(㎜)	Rated Ripple Current (mArms/105℃,120㎐)
450	47	16 × 20	400
	62	16 × 25	510
		18 × 20	510
	82	16 × 31.5	650
		18 × 25	640
	100	16 × 35.5	750
	110	18 × 31.5	800
	120	16 × 45	860
	130	18 × 35.5	920
	160	18 × 40	980
	180	18 × 45	1020
500	33	16 × 20	340
	39	16 × 25	390
	52	16 × 31.5	490
		18 × 25	480
	82	16 × 45	710
		18 × 31.5	660
		18 × 35.5	690
	100	16 × 50	810
		18 × 40	790

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(μF) \ Freq.(Hz)	120	1k	10k	50k	100k
33～82	1.00	1.75	2.25	2.35	2.50
100～1000	1.00	1.67	2.05	2.15	2.25