

NXB Series

• 105°C 2,000~5,000Hrs assured.

- Non-solvent proof.
- Very Low Impedance.
- For SMPS, IP-Board, Adaptor, Noise Filter, Charger.
- RoHS compliant.
- Halogen-free capacitors are also available.



SPECIFICATIONS

Item	Characteristics																				
Rated Voltage Range	6.3 ~ 120 V _{DC}																				
Operating Temperature Range	-40 ~ +105°C																				
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)																				
Leakage Current	I = 0.01CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, 2 minutes)																				
Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>120</td> </tr> <tr> <td>Tanδ(Max)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20°C, 120Hz)</p>	Rated voltage(V _{DC})	6.3	10	16	25	35	50	63	100	120	Tanδ(Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08
Rated voltage(V _{DC})	6.3	10	16	25	35	50	63	100	120												
Tanδ(Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08												
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> </tr> </table> <p>(at 120Hz)</p>	Z(-25°C)/Z(20°C)	2	Z(-40°C)/Z(20°C)	3																
Z(-25°C)/Z(20°C)	2																				
Z(-40°C)/Z(20°C)	3																				
Load Life	<p>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) at 105°C for the specified period of time.</p> <table border="1"> <tr> <td>∅ D</td> <td>Life Time</td> </tr> <tr> <td>∅ 5, 6.3</td> <td>2,000 hours</td> </tr> <tr> <td>∅ 8</td> <td>3,000 hours</td> </tr> <tr> <td>∅ 10</td> <td>4,000 hours</td> </tr> <tr> <td>∅ 12.5 ~</td> <td>5,000 hours</td> </tr> </table> <p>Capacitance change ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value</p>	∅ D	Life Time	∅ 5, 6.3	2,000 hours	∅ 8	3,000 hours	∅ 10	4,000 hours	∅ 12.5 ~	5,000 hours										
∅ D	Life Time																				
∅ 5, 6.3	2,000 hours																				
∅ 8	3,000 hours																				
∅ 10	4,000 hours																				
∅ 12.5 ~	5,000 hours																				
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C 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.</p> <p>Capacitance change ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value</p>																				
Others	Satisfied characteristics KS C IEC 60384-4																				

DIMENSIONS OF NXB Series

Unit(mm)

Marking : DARK BROWN SLEEVE, SILVER INK

∅D	5	6.3	8	10	12.5	16	18
∅d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
∅D'	∅D + 0.5 max.						
L'	L + 1.5 max.			L + 2.0 max.			

※ ∅10 x 12L, L' ≤ L + 1.5



RATINGS OF NXB Series

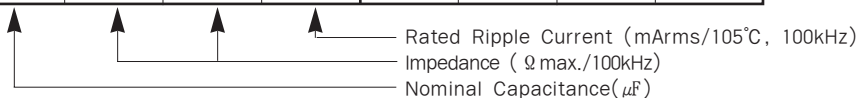
V _{DC} ∅D×L(mm)	6.3				10				16			
	μF	IMP.		Ripple	μF	IMP.		Ripple	μF	IMP.		Ripple
		20°C	-10°C			20°C	-10°C			20°C	-10°C	
5 × 11	220	0.30	1.0	250	150	0.30	1.00	250	100	0.30	1.0	250
6.3 × 11	470	0.13	0.41	405	330	0.13	0.41	405	100	0.15	0.41	385
									220	0.13	0.36	405
6.3 × 15	560	0.10	0.32	646	470	0.10	0.32	646	330	0.10	0.32	646
8 × 11.5	820	0.072	0.22	760	330	0.094	0.28	600	470	0.072	0.22	760
					680	0.072	0.22	760				
8 × 15	1,200	0.060	0.18	818	1,000	0.060	0.18	818	680	0.060	0.18	818
8 × 20	1,500	0.050	0.16	1,260	1,200	0.050	0.16	1,260	1,000	0.050	0.16	1,260
10 × 12	1,200	0.053	0.16	1,360	820	0.053	0.16	1,360	680	0.053	0.16	1,360
					1000	0.053	0.16	1,360				
10 × 12.5	1,200	0.053	0.16	1,360	820	0.053	0.16	1,360	680	0.053	0.16	1,360
					1000	0.053	0.16	1,360				
10 × 16	1,800	0.038	0.12	1,430	1,000	0.038	0.12	1,430	1,000	0.038	0.12	1,430
					1,500	0.038	0.12	1,430				
10 × 20	2,200	0.023	0.069	1,820	1,500	0.023	0.069	1,820	1,500	0.023	0.069	1,820
10 × 25	3,300	0.022	0.066	2,150	2,200	0.022	0.066	2,150	1,800	0.022	0.066	2,150
12.5 × 16	1,800	0.031	0.078	1,452	1,500	0.031	0.078	1,452	1,000	0.031	0.078	1,452
12.5 × 20	3,900	0.021	0.053	2,360	3,300	0.021	0.053	2,360	2,200	0.021	0.053	2,360
12.5 × 25	4,700	0.020	0.050	2,770	3,900	0.020	0.050	2,770	2,700	0.020	0.050	2,770
12.5 × 30	5,600	0.018	0.046	3,290	4,700	0.018	0.046	3,290	3,300	0.018	0.046	3,290
12.5 × 35	6,800	0.017	0.044	3,400	5,600	0.017	0.044	3,400	3,900	0.017	0.044	3,400
16 × 15	2,700	0.040	0.101	1,375	1,800	0.040	0.101	1,375	1,200	0.040	0.101	1,375
16 × 20	5,600	0.021	0.053	3,140	4,700	0.021	0.053	3,140	3,300	0.021	0.053	3,140
16 × 25	6,800	0.019	0.051	3,460	5,600	0.019	0.051	3,460	4,700	0.019	0.051	3,460
16 × 31.5	8,200	0.013	0.035	3,680	6,800	0.013	0.035	3,680	5,600	0.013	0.035	3,680
18 × 20	5,600	0.020	0.052	3,265	4,700	0.020	0.052	3,265	3,300	0.020	0.052	3,265
18 × 25	8,200	0.018	0.049	3,611	5,600	0.018	0.049	3,611	3,900	0.018	0.049	3,611

V _{DC} ∅D×L(mm)	25				35				50							
	μF	IMP.		Ripple	μF	IMP.		Ripple	μF	IMP.		Ripple				
		20°C	-10°C			20°C	-10°C			20°C	-10°C					
5 × 11	68	0.30	1.0	250	47	0.30	1.0	250	1	2.50	8.68	53				
									2.2	2.50	8.68	56				
									4.7	1.50	5.21	82				
									10	1.0	3.47	250				
									22	0.30	1.04	250				
									27	0.30	1.04	250				
6.3 × 11	150	0.13	0.41	405	100	0.13	0.41	405	47	0.14	0.50	350				
									56	0.14	0.50	385				
6.3 × 15	220	0.10	0.32	646	150	0.10	0.32	646	100	0.10	0.32	646				
8 × 11.5	220	0.072	0.22	760	150	0.072	0.22	760	100	0.072	0.21	724				
8 × 15	390	0.060	0.18	818	270	0.060	0.18	818	120	0.060	0.24	818				
8 × 20	560	0.050	0.16	1,260	390	0.050	0.16	1,260	180	0.050	0.18	1,260				
10 × 12	330	0.053	0.16	1,360	220	0.053	0.16	1,360	150	0.061	0.18	979				
													470	0.053	0.16	1,360
10 × 12.5	330	0.053	0.16	1,360	220	0.053	0.16	1,360	150	0.061	0.18	979				
													470	0.053	0.16	1,360
10 × 16	470	0.038	0.12	1,430	470	0.038	0.12	1,430	220	0.042	0.12	1,370				
													680	0.038	0.12	1,430
10 × 20	680	0.023	0.069	1,820	560	0.023	0.069	1,820	330	0.030	0.090	1,580				
													820	0.023	0.069	2,000
													1,000	0.025	0.075	1,900
10 × 25	1,000	0.022	0.066	2,150	680	0.022	0.066	2,150	470	0.028	0.085	1,870				
12.5 × 16	680	0.031	0.078	1,452	470	0.031	0.078	1,452	270	0.042	0.078	1,071				
12.5 × 20	1,500	0.021	0.053	2,360	1,000	0.021	0.053	2,360	470	0.027	0.068	2,050				
12.5 × 25	1,800	0.020	0.050	2,770	1,000	0.020	0.050	2,770	560	0.023	0.059	2,410				
													2,200	0.020	0.050	3,000
12.5 × 30	2,200	0.018	0.046	3,290	1,500	0.018	0.046	3,290	680	0.021	0.052	2,860				
12.5 × 35	2,700	0.017	0.044	3,400	1,800	0.017	0.044	3,400	820	0.019	0.051	2,960				
16 × 15	820	0.040	0.101	1,375	560	0.040	0.101	1,375	390	0.046	0.114	1,196				
16 × 20	2,200	0.021	0.053	3,140	1,500	0.021	0.053	3,140	820	0.023	0.059	2,730				
					1,800	0.019	0.051	3,460								
16 × 25	3,300	0.019	0.051	3,460	2,200	0.019	0.051	3,460	1,000	0.021	0.056	3,010				
					2,200	0.019	0.051	3,460								
16 × 31.5	3,300	0.013	0.035	3,680	2,200	0.013	0.035	3,680	1,500	0.014	0.037	3,201				
18 × 20	2,200	0.020	0.052	3,265	1,500	0.020	0.052	3,265	1,000	0.022	0.059	2,850				
18 × 25	2,700	0.018	0.049	3,611	1,800	0.018	0.049	3,611	1,200	0.020	0.053	3,140				

RATINGS OF NXB Series

∅D×L(mm)	V _{DC}	63			
		μF	IMP.		Ripple
			20°C	-10°C	
5 × 11		10	0.45	1.8	165
6.3 × 11		33	0.30	1.2	265
6.3 × 15		47	0.25	1.0	420
8 × 11.5		47	0.20	0.80	500
		68	0.20	0.80	500
10 × 12		68	0.16	0.64	600
10 × 12.5		68	0.16	0.64	600
10 × 16		100	0.10	0.40	945
10 × 20		150	0.080	0.32	1,100
10 × 25		220	0.070	0.28	1,300
12.5 × 20		330	0.040	0.16	1,495
16 × 20		470	0.035	0.14	1,990
16 × 25		680	0.030	0.12	2,780
16 × 31.5		1,000	0.020	0.080	2,835

∅D×L(mm)	V _{DC}	100				120			
		μF	IMP.		Ripple	μF	IMP.		Ripple
			20°C	-10°C			20°C	-10°C	
5 × 11		3.3	2.0	8.0	125				
5 × 11		4.7	2.0	8.0	125				
6.3 × 11		10	0.50	2.0	205				
6.3 × 15		22	0.40	1.6	300				
8 × 11.5		22	0.30	1.2	355	22	0.30	1.2	472
10 × 12		33	0.25	1.0	450	33	0.25	1.0	599
10 × 12.5		33	0.25	1.0	450	33	0.25	1.0	599
10 × 16		47	0.20	0.80	580	47	0.20	0.80	771
12.5 × 20		100	0.10	0.40	1,045	100	0.10	0.40	1,400
12.5 × 25		150	0.070	0.28	1,195	120	0.070	0.28	1,589
16 × 25		220	0.060	0.24	1,600	220	0.060	0.24	2,128
16 × 31.5		330	0.040	0.16	1,750	270	0.040	0.16	2,328
		470	0.040	0.16	1,750				
18 × 40		820	0.030	0.12	2,060	560	0.036	0.144	2,740



RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(μF)	Freq.(Hz)	120	1k	10k	50k	100k
1 ~ 180	120	0.40	0.75	0.90	0.95	1.00
	220	0.50	0.85	0.94	0.96	1.00
	680	0.60	0.87	0.95	0.97	1.00
	2,200	0.75	0.90	0.95	0.97	1.00
	4,700	0.85	0.95	0.98	0.99	1.00