

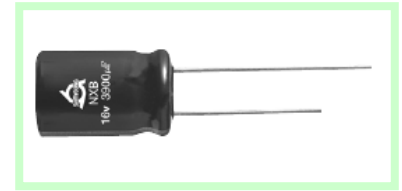
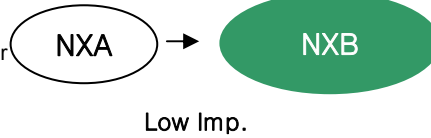
# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



## 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.



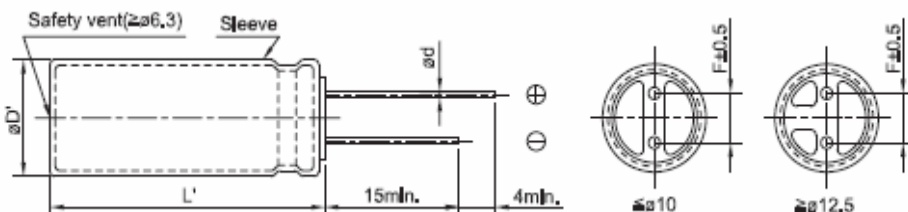
## SPECCIFICATIONS

Item	Characteristics																				
Rated Voltage Range	6.3 ~ 100 V <sub>DC</sub>																				
Operating Temperature Range	-40 ~ +105 °C																				
Capacitance Tolerance	±20% (M) (at 20 °C, 120Hz)																				
Leakage Current	I = 0.01CV or 3μA, whichever is greater. Where, I : Max. Leakage current(μA) C : Nominal capacitance(μF) V : Rated voltage(V <sub>DC</sub> ) (at 20 °C , 2 minutes)																				
Dissipation Factor ( tan δ )	<table border="1"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</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>0.09</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 <sub>DC</sub> )	6.3	10	16	25	35	50	63	80	100	Tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08
Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50	63	80	100												
Tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08												
Temperature Characteristics (Capacitance change 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 20 °C, 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 at 105 °C for the specified period of time</p> <table border="1"> <thead> <tr> <th>Case Size(ΦD)</th> <th>Life Time</th> </tr> </thead> <tbody> <tr> <td>Φ5 , 6.3</td> <td>2,000hrs</td> </tr> <tr> <td>Φ8</td> <td>3,000hrs</td> </tr> <tr> <td>Φ10</td> <td>4,000hrs</td> </tr> <tr> <td>Φ12.5 ~</td> <td>5,000hrs</td> </tr> </tbody> </table> <p>Capacitance change ≤ ±25 % of the initial value tan δ ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value</p>	Case Size(ΦD)	Life Time	Φ5 , 6.3	2,000hrs	Φ8	3,000hrs	Φ10	4,000hrs	Φ12.5 ~	5,000hrs										
Case Size(ΦD)	Life Time																				
Φ5 , 6.3	2,000hrs																				
Φ8	3,000hrs																				
Φ10	4,000hrs																				
Φ12.5 ~	5,000hrs																				
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 tan δ ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value</p>																				
Others	Satisfied characteristics KS C IEC 60384-4																				

\* Please refer each approval sheet for detail specification.

## DIMENSIONS OF NXB Series

Unit (mm)



Marking : DARK BROWN SLEEVE, SILVER INK

φD	5	6.3	8	10	12.5	16	18
φd	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
φD'	φD+0.5 max.						
L'	L+1.5 max.			L+2.0 max.			

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



**RATINGS OF NXB Series**

V <sub>DC</sub> ΦDxL(mm)	6.3			10			16		
	μF	IMP.	RIPPLE	μF	IMP.	RIPPLE	μF	IMP.	RIPPLE
5 × 11	220	0.30	250	150	0.30	250	100	0.30	250
6.3 × 11	470	0.13	405	330	0.13	405	100	0.15	385
6.3 × 15	560	0.10	646	470	0.10	646	220	0.13	405
8 × 11.5	820	0.072	760	330	0.094	600	330	0.10	646
8 × 15	1,200	0.060	818	680	0.072	760	470	0.072	760
8 × 20	1,500	0.050	1,260	1,000	0.060	818	680	0.060	818
10 × 12.5	1200	0.053	1,030	1,200	0.050	1,260	1,000	0.050	1,260
10 × 16	1800	0.038	1,430	820	0.053	1,030	680	0.053	1,030
10 × 20	2,200	0.023	1,820	1,000	0.053	1,030	1,000	0.038	1,430
10 × 25	3,300	0.022	2,150	1,500	0.038	1,430	1,500	0.038	1,430
12.5 × 16	1,800	0.031	1,452	2,200	0.023	1,820	1,800	0.023	1,820
12.5 × 20	3,900	0.021	2,360	2,200	0.022	2,150	1,800	0.022	2,150
12.5 × 25	4,700	0.020	2,770	1,500	0.031	1,452	1,000	0.031	1,452
12.5 × 30	5,600	0.018	3,290	3,300	0.021	2,360	2,200	0.021	2,360
12.5 × 35	6,800	0.017	3,400	3,900	0.020	2,770	2,700	0.020	2,770
16 × 15	2,700	0.040	1,375	4,700	0.018	3,290	3,300	0.018	3,290
16 × 20	5,600	0.021	3,140	5,600	0.017	3,400	3,900	0.017	3,400
16 × 25	6,800	0.019	3,460	1,800	0.040	1,375	1,200	0.040	1,375
16 × 31.5	8,200	0.013	3,680	4,700	0.021	3,140	3,300	0.021	3,140
18 × 15	3,300	0.043	1,279	5,600	0.019	3,460	4,700	0.019	3,460
18 × 20	5,600	0.023	2,826	6,800	0.013	3,680	5,600	0.013	3,680
18 × 25	8,200	0.018	3,611	2,200	0.043	1,279	1,800	0.043	1,279
				4,700	0.023	2,826	3,300	0.023	2,826
				5,600	0.018	3,611	3,900	0.018	3,611

V <sub>DC</sub> ΦDxL(mm)	25			35			50		
	μF	IMP.	RIPPLE	μF	IMP.	RIPPLE	μF	IMP.	RIPPLE
5 × 11	68	0.30	250	47	0.30	250	1	2.5	53
							2.2	2.5	56
							4.7	1.5	82
							10	1.0	250
							22	0.30	250
27	0.30	250							
6.3 × 11	150	0.13	405	100	0.13	405	47	0.14	350
							56	0.14	385
6.3 × 15	220	0.10	646	150	0.10	646	100	0.10	646
8 × 11.5	220	0.072	760	150	0.072	760	100	0.072	724
8 × 15	390	0.060	818	270	0.060	818	120	0.060	818
8 × 20	560	0.050	1,260	390	0.050	1,260	180	0.050	1,260
10 × 12.5	330	0.053	1,030	220	0.053	1,030	150	0.061	979
10 × 16	470	0.038	1,430	470	0.038	1,430	220	0.042	1,370
10 × 20	680	0.023	1,820	560	0.023	1,820	330	0.030	1,580
10 × 25	1,000	0.025	1,900	680	0.023	1,820			
10 × 25	1,000	0.022	2,150	680	0.022	2,150	470	0.028	1,870
12.5 × 16	680	0.031	1,452	470	0.031	1,452	270	0.042	1,071
12.5 × 20	1,500	0.021	2,360	1,000	0.021	2,360	470	0.027	2,050
12.5 × 25	1,800	0.020	2,770	1,000	0.020	2,770	560	0.023	2,410
12.5 × 30	2,200	0.018	3,290	1,500	0.018	3,290	680	0.021	2,860
12.5 × 35	2,700	0.017	3,400	1,800	0.017	3,400	820	0.019	2,960
16 × 15	820	0.040	1,375	560	0.040	1,375	390	0.046	1,196
16 × 20	2,200	0.021	3,140	1,500	0.021	3,140	820	0.023	2,730
16 × 25	3,300	0.019	3,460	2,200	0.019	3,460	1,000	0.021	3,010
16 × 31.5	3,300	0.013	3,680	2,200	0.013	3,680	1,500	0.014	3,201
18 × 15	1,200	0.043	1,279	680	0.043	1,279	470	0.049	1,122
18 × 20	2,200	0.023	2,826	1,500	0.023	2,826	1,000	0.022	2,850
18 × 25	2,700	0.018	3,611	1,800	0.018	3,611	1,200	0.020	3,140

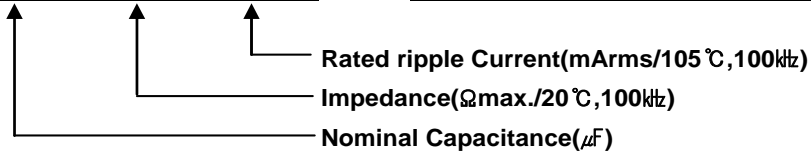
Rated ripple Current(mArms/105℃,100kHz)  
 Impedance(Ωmax./20℃,100kHz)  
 Nominal Capacitance(μF)



**RATINGS OF NXB Series**

V <sub>DC</sub> φDxL(mm)	63		
	μF	IMP.	RIPPLE
5 × 11	10	0.45	165
6.3 × 11	33	0.30	265
6.3 × 15	47	0.25	420
8 × 11.5	47	0.20	500
	68	0.20	500
10 × 12.5	68	0.16	600
10 × 16	100	0.10	945
10 × 20	150	0.080	1,100
10 × 25	220	0.070	1,300
12.5 × 20	330	0.040	1,495
16 × 20	470	0.035	1,990
16 × 25	680	0.030	2,780
16 × 35.5	1,000	0.020	2,835

V <sub>DC</sub> φDxL(mm)	100		
	μF	IMP.	RIPPLE
5 × 11	3.3	2.0	125
5 × 11	4.7	2.0	125
6.3 × 11	10	0.50	205
6.3 × 15	22	0.40	300
8 × 11.5	22	0.30	355
10 × 12.5	33	0.25	450
10 × 16	47	0.20	580
12.5 × 20	100	0.10	1,045
12.5 × 25	150	0.070	1,195
16 × 25	220	0.060	1,600
16 × 31.5	330	0.040	1,750
	470	0.040	1,750
18 × 40	470	0.030	2,060



**RATED RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Freq.(Hz) Cap.(μF)	120	1k	10k	50k	100k
1~180	0.40	0.75	0.90	0.95	1.00
220~560	0.50	0.85	0.94	0.96	1.00
680~1,800	0.60	0.87	0.95	0.97	1.00
2,200~3,900	0.75	0.90	0.95	0.97	1.00
4,700~18,000	0.85	0.95	0.98	0.99	1.00