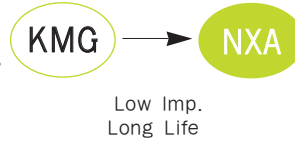


## NXA Series

• 105°C 4,000 ~ 10,000Hrs assured.

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



## SPECIFICATIONS

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(μA) 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(Tanδ)	<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 (Max. Impedance ratio)	<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>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> <p>(at 120Hz)</p>	Rated Voltage(V <sub>dc</sub> )	6.3	10	16	25	35	50	63	80	100	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3	3	3	3
Rated Voltage(V <sub>dc</sub> )	6.3	10	16	25	35	50	63	80	100																						
Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2																						
Z(-40°C)/Z(+20°C)	8	6	4	3	3	3	3	3	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></td> <td>V<sub>dc</sub></td> <td>φ5~φ6.3</td> <td>φ8~φ10</td> <td>φ12.5~φ18</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±25% of the initial value</td> <td>6.3~10(V)</td> <td>4,000 hours</td> <td>6,000 hours</td> <td>8,000 hours</td> </tr> <tr> <td>Tanδ</td> <td>≤ 200% of the initial specified value</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> <td>16~100(V)</td> <td>5,000 hours</td> <td>7,000 hours</td> <td>10,000 hours</td> </tr> </table>		V <sub>dc</sub>	φ5~φ6.3	φ8~φ10	φ12.5~φ18	Capacitance change	≤ ±25% of the initial value	6.3~10(V)	4,000 hours	6,000 hours	8,000 hours	Tanδ	≤ 200% of the initial specified value				Leakage current	≤ The initial specified value	16~100(V)	5,000 hours	7,000 hours	10,000 hours								
	V <sub>dc</sub>	φ5~φ6.3	φ8~φ10	φ12.5~φ18																											
Capacitance change	≤ ±25% of the initial value	6.3~10(V)	4,000 hours	6,000 hours	8,000 hours																										
Tanδ	≤ 200% of the initial specified value																														
Leakage current	≤ The initial specified value	16~100(V)	5,000 hours	7,000 hours	10,000 hours																										
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 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 NXA 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.			

※ φ10 x 12L, L' ≤ L + 1.5



# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

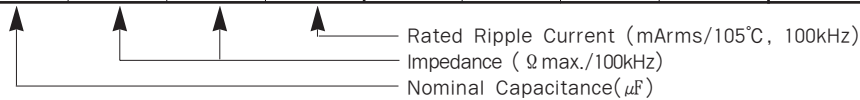
## RATINGS OF NXA Series

V <sub>dc</sub> ∅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	150	0.58	2.3	210	100	0.58	2.3	210	56	0.58	2.3	210
6.3×11	330	0.22	0.87	340	220	0.22	0.87	340	120	0.22	0.87	340
8×11.5	680	0.130	0.52	640	470	0.130	0.52	640	330	0.130	0.52	640
8×15	1,000	0.087	0.35	840	680	0.087	0.35	840	470	0.087	0.35	840
8×20	1,200	0.069	0.27	1,050	1,000	0.069	0.27	1,050	680	0.069	0.27	1,050
10×12	820	0.080	0.32	865	680	0.080	0.32	865	470	0.080	0.32	865
10×12.5	820	0.080	0.32	865	680	0.080	0.32	865	470	0.080	0.32	865
10×16	1,200	0.060	0.24	1,210	1,000	0.060	0.24	1,210	680	0.060	0.24	1,210
10×20	1,500	0.046	0.18	1,400	1,200	0.046	0.18	1,400	1,000	0.046	0.18	1,400
10×25	2,200	0.042	0.17	1,650	1,500	0.042	0.17	1,650	1,200	0.042	0.17	1,650
10×30	2,700	0.031	0.12	1,910	2,200	0.031	0.12	1,910	1,500	0.031	0.12	1,910
12.5×16	1,800	0.049	0.16	1,450	1,500	0.049	0.16	1,450	1,000	0.049	0.16	1,450
12.5×20	3,300	0.035	0.12	1,900	2,200	0.035	0.12	1,900	1,500	0.035	0.12	1,900
12.5×25	3,900	0.027	0.089	2,230	3,300	0.027	0.089	2,230	2,200	0.027	0.089	2,230
12.5×30	4,700	0.024	0.078	2,650	3,900	0.024	0.078	2,650	2,700	0.024	0.078	2,650
12.5×35	5,600	0.020	0.065	2,880	4,700	0.020	0.065	2,880	3,300	0.020	0.065	2,880
16×15	2,700	0.042	0.12	1,940	2,200	0.042	0.12	1,940	1,500	0.042	0.12	1,940
16×20	5,600	0.027	0.078	2,530	3,900	0.027	0.078	2,530	2,700	0.027	0.078	2,530
16×25	6,800	0.021	0.060	2,930	5,600	0.021	0.06	2,930	3,900	0.021	0.06	2,930
16×31.5	8,200	0.017	0.050	3,450	6,800	0.017	0.05	3,450	4,700	0.017	0.05	3,450
16×35.5	10,000	0.015	0.044	3,610	8,200	0.015	0.044	3,610	5,600	0.015	0.044	3,610
16×40	12,000	0.013	0.038	4,080	10,000	0.013	0.038	4,080	6,800	0.013	0.038	4,080
18×20	6,800	0.026	0.067	2,860	5,600	0.026	0.067	2,860	3,900	0.026	0.067	2,860
18×25	10,000	0.019	0.049	3,140	6,800	0.019	0.049	3,140	4,700	0.019	0.049	3,140
18×31.5	12,000	0.017	0.047	4,170	8,200	0.017	0.047	4,170	5,600	0.017	0.047	4,170
18×35.5	15,000	0.016	0.045	4,220	10,000	0.016	0.045	4,220	8,200	0.016	0.045	4,220
18×40	18,000	0.015	0.043	4,280	12,000	0.015	0.043	4,280	10,000	0.015	0.043	4,280

V <sub>dc</sub> ∅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	47	0.58	2.3	210	33	0.58	2.3	210	1	4.0	16.0	50
									2.2	2.5	10.0	51
									3.3	2.2	8.8	53
									4.7	3.0	12.0	80
									10	1.5	6.0	100
6.3×11	100	0.22	0.87	340	56	0.22	0.87	340	22	0.70	2.8	180
									22	0.30	1.2	295
									47	0.30	1.2	340
8×11.5	220	0.13	0.52	640	150	0.13	0.52	640	100	0.17	0.68	555
8×15	330	0.087	0.35	840	220	0.087	0.35	840	120	0.12	0.48	730
8×20	470	0.069	0.27	1,050	270	0.069	0.27	1,050	180	0.090	0.36	910
10×12	330	0.080	0.32	865	220	0.080	0.32	865	150	0.12	0.48	760
10×12.5	330	0.080	0.32	865	220	0.080	0.32	865	150	0.12	0.48	760
10×16	470	0.060	0.24	1,210	330	0.060	0.24	1,210	220	0.084	0.34	1,050
10×20	680	0.046	0.18	1,400	470	0.046	0.18	1,400	270	0.060	0.24	1,220
10×25	820	0.042	0.17	1,650	560	0.042	0.17	1,650	330	0.055	0.22	1,440
10×30	1,000	0.031	0.12	1,910	680	0.031	0.12	1,910	470	0.043	0.17	1,690
12.5×16	680	0.049	0.16	1,450	470	0.049	0.16	1,450	270	0.061	0.20	1,260
12.5×20	1,000	0.035	0.12	1,900	680	0.035	0.12	1,900	470	0.045	0.15	1,660
12.5×25	1,500	0.027	0.089	2,230	1,000	0.027	0.089	2,230	560	0.034	0.11	1,950
12.5×30	1,800	0.024	0.078	2,650	1,200	0.024	0.078	2,650	680	0.030	0.10	2,310
12.5×35	2,200	0.020	0.065	2,880	1,500	0.020	0.065	2,880	820	0.025	0.083	2,510
16×15	1,000	0.042	0.12	1,940	680	0.042	0.12	1,940	470	0.055	0.17	1,690
16×20	1,800	0.027	0.078	2,530	1,200	0.027	0.078	2,530	820	0.034	0.10	2,210
16×25	2,700	0.021	0.060	2,930	1,800	0.021	0.060	2,930	1,000	0.025	0.075	2,555
16×31.5	3,300	0.017	0.050	3,450	2,200	0.017	0.050	3,450	1,200	0.022	0.066	3,010
16×35.5	3,900	0.015	0.044	3,610	2,700	0.015	0.044	3,610	1,500	0.019	0.057	3,150
16×40	4,700	0.013	0.038	4,080	3,300	0.013	0.038	4,080	1,800	0.016	0.048	3,710
18×20	2,200	0.026	0.067	2,860	1,800	0.026	0.067	2,860	1,000	0.036	0.097	2,490
18×25	3,300	0.019	0.049	3,140	2,200	0.019	0.049	3,140	1,200	0.026	0.070	2,740
18×31.5	3,900	0.017	0.047	4,170	2,700	0.017	0.047	4,170	1,800	0.021	0.057	3,635
18×35.5	4,700	0.016	0.045	4,220	3,300	0.016	0.045	4,220	2,200	0.017	0.046	3,680
18×40	5,600	0.015	0.043	4,280	3,900	0.015	0.043	4,280	2,700	0.016	0.045	3,800

**RATINGS OF NXA Series**

Vdc #DxL(mm)	63				80				100			
	μF	IMP.		Ripple	μF	IMP.		Ripple	μF	IMP.		Ripple
		20°C	-10°C			20°C	-10°C			20°C	-10°C	
5 × 11	15	0.88	3.5	165					4.7	1.5	6.0	105
									6.8	1.4	5.6	125
6.3 × 11	33	0.35	1.4	265					15	0.57	2.3	205
8 × 11.5	47	0.22	0.88	500					22	0.50	1.9	310
	56	0.22	0.88	500					27	0.36	1.4	355
8 × 15	82	0.16	0.64	665					39	0.25	1.0	450
8 × 20	120	0.12	0.48	820					68	0.19	0.76	565
10 × 12	82	0.11	0.44	690	68	0.17	0.66	480	47	0.17	0.66	480
10 × 12.5	82	0.11	0.44	690	68	0.17	0.66	480	47	0.17	0.66	480
10 × 16	120	0.076	0.31	950	100	0.11	0.47	600	68	0.11	0.47	600
10 × 20	180	0.056	0.23	1,150	120	0.084	0.34	800	82	0.084	0.34	800
									100	0.084	0.34	800
10 × 25	220	0.046	0.19	1,350	150	0.069	0.28	900	100	0.069	0.28	900
									120	0.069	0.28	900
12.5 × 16	180	0.072	0.29	1,150	150	0.11	0.34	750	100	0.11	0.34	750
12.5 × 20	270	0.041	0.13	1,500	220	0.062	0.18	1,100	150	0.062	0.18	1,100
12.5 × 25	390	0.031	0.093	1,900	330	0.047	0.14	1,250	220	0.047	0.14	1,250
12.5 × 30	470	0.028	0.084	2,300	390	0.042	0.13	1,500	270	0.042	0.13	1,500
12.5 × 35	560	0.024	0.072	2,500	470	0.036	0.11	1,650	330	0.036	0.11	1,650
									390	0.036	0.11	1,650
16 × 20	470	0.032	0.096	2,000	330	0.048	0.15	1,350	220	0.048	0.15	1,350
16 × 25	680	0.025	0.075	2,600	470	0.038	0.12	1,700	330	0.036	0.11	1,650
16 × 31.5	820	0.021	0.063	2,850	680	0.032	0.095	1,850	470	0.032	0.095	1,850
16 × 35.5	1,000	0.019	0.057	2,900	820	0.029	0.086	2,000	560	0.029	0.086	2,000
16 × 40	1,200	0.018	0.054	3,400	1,000	0.027	0.081	2,200	680	0.027	0.081	2,200
18 × 20	680	0.030	0.090	2,500	470	0.038	0.12	1,700	330	0.045	0.14	1,500
18 × 25	1,000	0.024	0.072	2,800	680	0.036	0.11	1,750	470	0.036	0.11	1,750
18 × 31.5	1,200	0.020	0.060	3,300	820	0.030	0.090	1,900	560	0.030	0.09	1,900
18 × 35.5	1,500	0.018	0.054	3,400	1,000	0.027	0.081	2,200	680	0.027	0.081	2,200
18 × 40	1,800	0.017	0.051	3,500	1,200	0.026	0.077	2,700	820	0.026	0.077	2,700



**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