

NXA Series

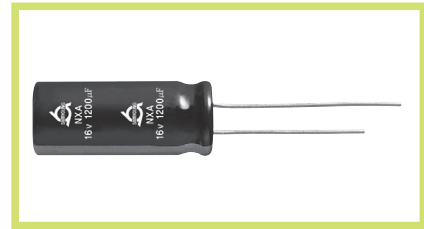
• 105°C 6,000 ~ 10,000Hrs assured.

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

KMG

NXA

Low Imp.
Long Life



SPECIFICATIONS

Item	Characteristics																														
Rated Voltage Range	6.3 ~ 100 V _{DC}																														
Operating Temperature Range	-40 ~ +105℃																														
Capacitance Tolerance	±20%(M) (at 20℃, 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℃, 2 minutes)																														
Dissipation Factor(Tanδ)	<table><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>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> When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20℃, 120Hz)	Rated Voltage(V _{DC})	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 _{DC})	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><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>80</td><td>100</td></tr><tr><td>Z(-25℃)/Z(+20℃)</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℃)/Z(+20℃)</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> (at 120Hz)	Rated Voltage(V _{DC})	6.3	10	16	25	35	50	63	80	100	Z(-25℃)/Z(+20℃)	4	3	2	2	2	2	2	2	2	Z(-40℃)/Z(+20℃)	8	6	4	3	3	3	3	3	3
Rated Voltage(V _{DC})	6.3	10	16	25	35	50	63	80	100																						
Z(-25℃)/Z(+20℃)	4	3	2	2	2	2	2	2	2																						
Z(-40℃)/Z(+20℃)	8	6	4	3	3	3	3	3	3																						
Load Life	The following specifications 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) at 105℃ for the specified period of time. <table><tr><td>V_{DC}</td><td>ø8~ø10</td><td>ø12.5~ø18</td></tr><tr><td>6.3~10(V)</td><td>6,000 hours</td><td>8,000 hours</td></tr><tr><td>16~100(V)</td><td>7,000 hours</td><td>10,000 hours</td></tr></table> Capacitance change ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value	V _{DC}	ø8~ø10	ø12.5~ø18	6.3~10(V)	6,000 hours	8,000 hours	16~100(V)	7,000 hours	10,000 hours																					
V _{DC}	ø8~ø10	ø12.5~ø18																													
6.3~10(V)	6,000 hours	8,000 hours																													
16~100(V)	7,000 hours	10,000 hours																													
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 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 ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value																														
Others	Satisfied characteristics KS C IEC 60384-4																														

DIMENSIONS OF NXA Series

Unit(mm)

Technical drawing of a capacitor showing side and end views with dimensions:

- Side View:**
 - Labels: Safety vent, Sleeve
 - Dimensions: $\phi D'$, L' , $15min.$, $4min.$
 - Thread specification: $\phi d \pm 0.05$
- End View (Left):**
 - Dimension: $F \pm 0.5$
 - Feature: $\leq \phi 10$
- End View (Right):**
 - Dimension: $F \pm 0.5$
 - Feature: $\geq \phi 12.5$

Marking : DARK BROWN SLEEVE, SILVER INK

ϕD	8	10	12.5	16	18
ϕd	0.6	0.6	0.6	0.8	0.8
F	3.5	5.0	5.0	7.5	7.5
$\phi D'$	$\phi D + 0.5 \text{ max.}$				
L'	$L + 1.5 \text{ max.}$		$L + 2.0 \text{ max.}$		

※ $\phi 10 \times 12L$, $L' \leq L + 1.5$



MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

RATINGS OF NXA Series

V _{DC} ØD×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	
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 _{DC} ØD×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	
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

V _{DC} #D×L(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	
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 (mA rms/105°C, 100kHz)
 ↑ Impedance (Ω max./100kHz)
 ↑ Nominal Capacitance(μF)

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz) Cap.(μF)	120	1k	10k	50K	100k
39 ~ 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