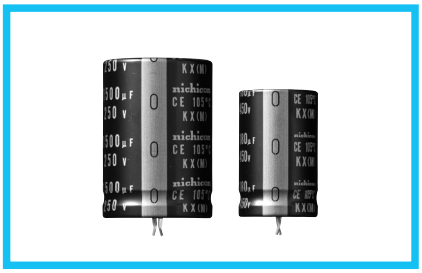
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

KX Snap-in Terminal Type, For Audio Equipment, of Switching Power Supplies series

For Audio Use

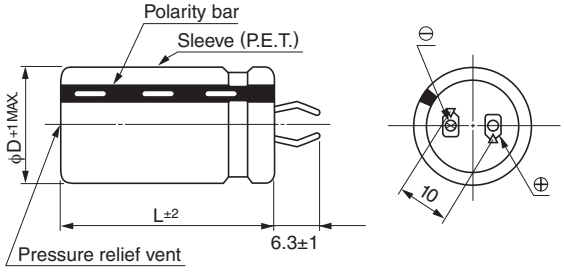


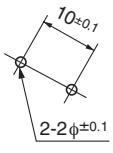
- In order to get high quality sound from 105°C standard series.
- Selected materials to achieve superior acoustic sound.
- Compliant to the RoHS directive (2011/65/EU).

■Specifications

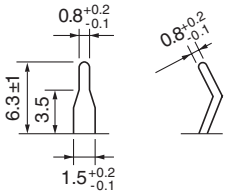
Item	Performance Characteristics
Category Temperature Range	– 40 to +105°C (200 • 250V), – 25 to + 105°C (400 • 450V)
Rated Voltage Range	200 to 450V
Rated Capacitance Range	56 to 2200μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA), [C : Rated Capacitance(μF), V : Voltage (V)]
Tangent of loss angle (tan δ)	Rated voltage(V): 200 to 400 / 450; tan δ (MAX.): 0.15 / 0.20. Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Rated voltage(V): 200 to 250 / 400 to 450; Impedance ratio ZT/Z20(MAX.) Z – 25°C/Z+20°C: 4 / 8; Z – 40°C/Z+20°C: 12 / —. Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C. Capacitance change: Within ±20% of the initial capacitance value; tan δ: 200% or less than the initial specified value; Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed at right. Capacitance change: Within ±15% of the initial capacitance value; tan δ: 150% or less than the initial specified value; Leakage current: Less than or equal to the initial specified value
Marking	Printed with gold color letter on black sleeve.

■Drawing





(PC board hole dimensions)



(Terminal dimensions)

Type numbering system (Example : 400 V 120μF , Dia.φ25)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
L	K	X	2	G	1	2	1	M	E	S	A	2	5

- 12 13 14 : Case length code
- 12 13 14 : Case dia.code

φD	Code
20	Y
22	Z
25	A
30	B
35	C

- 11 : Configuration
- 10 : Capacitance tolerance (±20%)
- 8 9 : Rated capacitance (120μF)
- 7 : Rated voltage (400V)
- 4 5 6 : Series name
- 1 2 3 : Type

● Frequency coefficient of rated ripple current

Frequency (Hz)		50	60	120	300	1k	10k	50k or more
Coeff.	200 to 250V	0.81	0.85	1.00	1.17	1.32	1.45	1.50
	400 to 450V	0.77	0.82	1.00	1.16	1.30	1.41	1.43

● Dimension table in next page.

KX series

■ Dimensions

200V (2D)				
Cap. (μF)	Size φD x L(mm)	Rated ripple (Arms)	tan δ	Code
220	20×25	0.90	0.15	LKX2D221MESY25
270	20×30	0.99	0.15	LKX2D271MESY30
	22×25	0.99	0.15	LKX2D271MESZ25
330	20×35	1.20	0.15	LKX2D331MESY35
390	20×40	1.31	0.15	LKX2D391MESY40
	22×30	1.31	0.15	LKX2D391MESZ30
	25×25	1.31	0.15	LKX2D391MESA25
470	20×45	1.48	0.15	LKX2D471MESY45
	22×35	1.48	0.15	LKX2D471MESZ35
	25×30	1.48	0.15	LKX2D471MESA30
560	20×50	1.60	0.15	LKX2D561MESY50
	22×40	1.60	0.15	LKX2D561MESZ40
	25×35	1.60	0.15	LKX2D561MESA35
680	22×45	1.75	0.15	LKX2D681MESZ45
	25×40	1.75	0.15	LKX2D681MESA40
	30×30	1.75	0.15	LKX2D681MESB30
	35×25	1.75	0.15	LKX2D681MESC25
820	25×45	2.04	0.15	LKX2D821MESA45
	30×35	2.04	0.15	LKX2D821MESB35
1000	25×50	2.30	0.15	LKX2D102MESA50
	30×40	2.30	0.15	LKX2D102MESB40
	35×30	2.30	0.15	LKX2D102MESC30
1200	30×45	2.65	0.15	LKX2D122MESB45
	35×35	2.65	0.15	LKX2D122MESC35
1500	30×50	2.80	0.15	LKX2D152MESB50
	35×40	2.80	0.15	LKX2D152MESC40
1800	35×45	3.08	0.15	LKX2D182MESC45
2200	35×50	3.48	0.15	LKX2D222MESC50

250V (2E)				
Cap. (μF)	Size φD x L(mm)	Rated ripple (Arms)	tan δ	Code
180	20×25	0.90	0.15	LKX2E181MESY25
220	20×30	1.00	0.15	LKX2E221MESY30
	22×25	1.00	0.15	LKX2E221MESZ25
270	20×35	1.10	0.15	LKX2E271MESY35
	22×30	1.10	0.15	LKX2E271MESZ30
330	20×40	1.20	0.15	LKX2E331MESY40
	22×35	1.20	0.15	LKX2E331MESZ35
	25×25	1.20	0.15	LKX2E331MESA25
390	20×45	1.30	0.15	LKX2E391MESY45
	22×40	1.30	0.15	LKX2E391MESZ40
	25×30	1.30	0.15	LKX2E391MESA30
470	20×50	1.40	0.15	LKX2E471MESY50
	22×45	1.40	0.15	LKX2E471MESZ45
	25×35	1.40	0.15	LKX2E471MESA35
	30×25	1.40	0.15	LKX2E471MESB25
560	22×50	1.50	0.15	LKX2E561MESZ50
	25×40	1.50	0.15	LKX2E561MESA40
	30×30	1.50	0.15	LKX2E561MESB30
	35×25	1.50	0.15	LKX2E561MESC25
680	25×50	1.70	0.15	LKX2E681MESA50
	30×35	1.70	0.15	LKX2E681MESB35
820	30×40	2.00	0.15	LKX2E821MESB40
	35×30	2.00	0.15	LKX2E821MESC30
1000	30×45	2.20	0.15	LKX2E102MESB45
	35×35	2.20	0.15	LKX2E102MESC35
1200	35×40	2.30	0.15	LKX2E122MESC40
1500	35×50	2.50	0.15	LKX2E152MESC50

400V (2G)				
Cap. (μF)	Size φD x L(mm)	Rated ripple (Arms)	tan δ	Code
68	20×25	0.49	0.15	LKX2G680MESY25
82	20×30	0.64	0.15	LKX2G820MESY30
	22×25	0.64	0.15	LKX2G820MESZ25
100	20×35	0.68	0.15	LKX2G101MESY35
120	20×35	0.73	0.15	LKX2G121MESY35
	22×30	0.73	0.15	LKX2G121MESZ30
	25×25	0.73	0.15	LKX2G121MESA25
150	20×45	0.85	0.15	LKX2G151MESY45
	22×35	0.85	0.15	LKX2G151MESZ35
	25×30	0.85	0.15	LKX2G151MESA30
180	20×50	0.95	0.15	LKX2G181MESY50
	22×40	0.95	0.15	LKX2G181MESZ40
	25×35	0.95	0.15	LKX2G181MESA35
220	22×50	1.10	0.15	LKX2G221MESZ50
	25×40	1.10	0.15	LKX2G221MESA40
	30×30	1.10	0.15	LKX2G221MESB30
	35×25	1.10	0.15	LKX2G221MESC25
270	25×45	1.22	0.15	LKX2G271MESA45
	30×35	1.22	0.15	LKX2G271MESB35
330	25×50	1.44	0.15	LKX2G331MESA50
	30×40	1.44	0.15	LKX2G331MESB40
	35×30	1.44	0.15	LKX2G331MESC30
390	30×45	1.55	0.15	LKX2G391MESB45
	35×35	1.55	0.15	LKX2G391MESC35
470	30×50	1.68	0.15	LKX2G471MESB50
	35×40	1.68	0.15	LKX2G471MESC40
560	35×45	1.90	0.15	LKX2G561MESC45
680	35×50	2.12	0.15	LKX2G681MESC50

450V (2W)				
Cap. (μF)	Size φD x L(mm)	Rated ripple (Arms)	tan δ	Code
56	20×25	0.44	0.20	LKX2W560MESY25
68	20×30	0.50	0.20	LKX2W680MESY30
82	20×35	0.64	0.20	LKX2W820MESY35
	22×30	0.64	0.20	LKX2W820MESZ30
100	20×40	0.69	0.20	LKX2W101MESY40
	22×30	0.69	0.20	LKX2W101MESZ30
	25×25	0.69	0.20	LKX2W101MESA25
120	20×45	0.72	0.20	LKX2W121MESY45
	22×35	0.72	0.20	LKX2W121MESZ35
	25×30	0.72	0.20	LKX2W121MESA30
150	22×45	0.79	0.20	LKX2W151MESZ45
	25×35	0.79	0.20	LKX2W151MESA35
	30×25	0.79	0.20	LKX2W151MESB25
180	22×50	0.87	0.20	LKX2W181MESZ50
	25×40	0.87	0.20	LKX2W181MESA40
	30×30	0.87	0.20	LKX2W181MESB30
	35×25	0.87	0.20	LKX2W181MESC25
220	25×45	1.05	0.20	LKX2W221MESA45
	30×35	1.05	0.20	LKX2W221MESB35
270	30×40	1.23	0.20	LKX2W271MESB40
	35×30	1.23	0.20	LKX2W271MESC30
330	30×45	1.38	0.20	LKX2W331MESB45
	35×35	1.38	0.20	LKX2W331MESC35
390	35×40	1.61	0.20	LKX2W391MESC40
470	35×45	1.78	0.20	LKX2W471MESC45
560	35×50	1.99	0.20	LKX2W561MESC50

Rated ripple current (Arms) at 105°C 120Hz