NIPPON CHEMI-CON

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

Low impedance, 105℃

KY Series

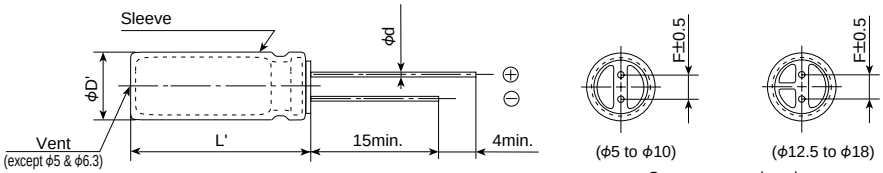
- Newly innovative electrolyte is employed to minimize ESR
- Endurance with ripple current : 4000 to 10000 hours at 105℃
- Non solvent-proof type

KZH
↑ lower Z
KZE
↑ lower Z
KY

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−40 to +105℃
Rated Voltage Range	6.3 to 50Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 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) (at 20℃ after 2 minutes)
Dissipation Factor (tanδ)	Rated voltage (Vdc): 6.3V / 10V / 16V / 25V / 35V / 50V tanδ (Max.): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase. (at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc): 6.3V / 10V / 16V / 25V / 35V / 50V Z(−25℃)/Z(+20℃): 4 / 3 / 2 / 2 / 2 / 2 Z(−40℃)/Z(+20℃): 8 / 6 / 4 / 3 / 3 / 3 (at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105℃. Time: 6.3 to 10Vdc: φ5 & 6.3 : 4000hours φ8 & 10 : 6000hours φ12.5 to 18 : 8000hours Time: 16 to 50Vdc: φ5 & 6.3 : 5000hours φ8 & 10 : 7000hours φ12.5 to 18 : 10000hours Capacitance change: ≦±25% of the initial value D.F. (tanδ): ≦200% of the initial specified value Leakage current: ≦The initial specified value
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. Capacitance change: ≦±25% of the initial value D.F. (tanδ): ≦200% of the initial specified value Leakage current: ≦The initial specified value

◆DIMENSIONS (Radial Lead Type=VB) [mm]



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+0.5max.						
L'	L+1.5max.						

◆PART NUMBERING SYSTEM

KY 10 VB 1000 M H20

- H20 : Case code
- M : Capacitance tolerance (±20%)
- 1000 : Nominal capacitance code
- VB : Radial lead type
- 10 : Rated voltage in volts
- KY : Series name

Capacitance	Code
4.7μF	4R7
10μF	10
100μF	100
2200μF	2200

◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Capacitance (μF) \ Frequency (Hz)	120	1k	10k	100k
22 to 180	0.40	0.75	0.90	1.00
220 to 560	0.50	0.85	0.94	1.00
680 to 1,800	0.60	0.87	0.95	1.00
2,200 to 3,900	0.75	0.90	0.95	1.00
4,700 to	0.85	0.95	0.98	1.00

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Low impedance, 105℃

KY Series

◆STANDARD RATINGS

Case size φD×L (mm)	Case code	Vdc	6.3			10			16		
		Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)
5×11	E11	150	0.58	2.3	210	100	0.58	2.3	210	56	0.58	2.3	210
6.3×11	F11	330	0.22	0.87	340	220	0.22	0.87	340	120	0.22	0.87	340
8×11.5	H11	680	0.13	0.52	640	470	0.13	0.52	640	330	0.13	0.52	640
8×15	H15	1,000	0.087	0.35	840	680	0.087	0.35	840	470	0.087	0.35	840
8×20	H20	1,200	0.069	0.27	1,050	1,000	0.069	0.27	1,050	680	0.069	0.27	1,050
10×12.5	J12	820	0.080	0.32	865	680	0.080	0.32	865	470	0.080	0.32	865
10×16	J16	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	J20	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	J25	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	J30	2,700	0.031	0.12	1,910	2,200	0.031	0.12	1,910	1,500	0.031	0.12	1,910
12.5×15	K15	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	K20	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	K25	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	K30	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	K35	5,600	0.020	0.065	2,880	4,700	0.020	0.065	2,880	3,300	0.020	0.065	2,880
12.5×40	K40	6,800	0.017	0.056	3,350	5,600	0.017	0.056	3,350	3,900	0.017	0.056	3,350
16×15	L15	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	L20	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	L25	6,800	0.021	0.060	2,930	5,600	0.021	0.060	2,930	3,900	0.021	0.060	2,930
16×31.5	L31	8,200	0.017	0.050	3,450	6,800	0.017	0.050	3,450	4,700	0.017	0.050	3,450
16×35.5	L35	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	L40	12,000	0.013	0.038	4,080	10,000	0.013	0.038	4,080	6,800	0.013	0.038	4,080
18×15	M15	3,900	0.043	0.11	2,210	2,700	0.043	0.11	2,210	2,200	0.043	0.11	2,210
18×20	M20	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	M25	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	M31	12,000	0.015	0.040	4,170	8,200	0.015	0.040	4,170	5,600	0.015	0.040	4,170
18×35.5	M35	15,000	0.014	0.038	4,220	10,000	0.014	0.038	4,220	8,200	0.014	0.038	4,220
18×40	M40	18,000	0.012	0.032	4,280	12,000	0.012	0.032	4,280	10,000	0.012	0.032	4,280

Case size φD×L (mm)	Case code	Vdc	25			35			50		
		Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Rated ripple current (mArms/105℃ 100kHz)
5×11	E11									0.47	5.5	22.0	17
5×11	E11									1.0	4.0	16.0	30
5×11	E11									2.2	2.5	10.0	43
5×11	E11									3.3	2.2	8.8	53
5×11	E11									4.7	1.9	7.6	88
5×11	E11									10	1.5	6.0	100
5×11	E11	47	0.58	2.3	210	33	0.58	2.3	210	22	0.70	2.8	180
6.3×11	F11	100	0.22	0.87	340	56	0.22	0.87	340	56	0.30	1.2	295
8×11.5	H11	220	0.13	0.52	640	150	0.13	0.52	640	100	0.17	0.68	555
8×15	H15	330	0.087	0.35	840	220	0.087	0.35	840	120	0.12	0.48	730
8×20	H20	470	0.069	0.27	1,050	270	0.069	0.27	1,050	180	0.091	0.36	910
10×12.5	J12	330	0.080	0.32	865	220	0.080	0.32	865	150	0.12	0.48	760
10×16	J16	470	0.060	0.24	1,210	330	0.060	0.24	1,210	220	0.084	0.34	1,050
10×20	J20	680	0.046	0.18	1,400	470	0.046	0.18	1,400	270	0.060	0.24	1,220
10×25	J25	820	0.042	0.17	1,650	560	0.042	0.17	1,650	330	0.055	0.22	1,440
10×30	J30	1,000	0.031	0.12	1,910	680	0.031	0.12	1,910	470	0.043	0.17	1,690
12.5×15	K15	680	0.049	0.16	1,450	470	0.049	0.16	1,450	270	0.061	0.20	1,260
12.5×20	K20	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	K25	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	K30	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	K35	2,200	0.020	0.065	2,880	1,500	0.020	0.065	2,880	820	0.025	0.083	2,510
12.5×40	K40	2,700	0.017	0.056	3,350	1,800	0.017	0.056	3,350	1,000	0.021	0.069	2,920
16×15	L15	1,000	0.042	0.12	1,940	680	0.042	0.12	1,940	470	0.055	0.17	1,690
16×20	L20	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	L25	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	L31	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	L35	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	L40	4,700	0.013	0.038	4,080	3,300	0.013	0.038	4,080	1,800	0.016	0.048	3,710
18×15	M15	1,200	0.043	0.11	2,210	1,000	0.043	0.11	2,210	560	0.054	0.15	1,930
18×20	M20	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	M25	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	M31	3,900	0.015	0.040	4,170	2,700	0.015	0.040	4,170	1,800	0.021	0.057	3,635
18×35.5	M35	4,700	0.014	0.038	4,220	3,300	0.014	0.038	4,220	2,200	0.017	0.046	3,680
18×40	M40	5,600	0.012	0.032	4,280	3,900	0.012	0.032	4,280	2,700	0.014	0.038	3,800