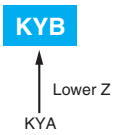
KYB Series

- Low impedance, high ripple and long life from KYA series
- Newly innovative electrolyte is employed to minimize impedance
- Endurance with ripple current : 8,000/10,000 hours at 105℃
- Non solvent resistant type
- RoHS2 Compliant

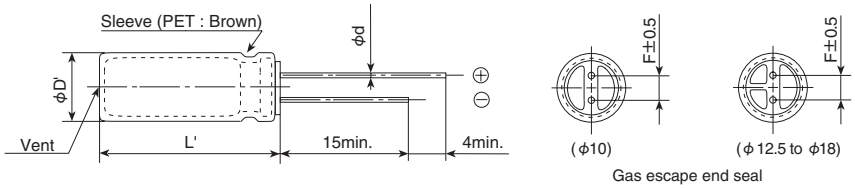


◆SPECIFICATIONS

Items	Characteristics									
Category Temperature Range	-40 to +105℃									
Rated Voltage Range	6.3 to 100Vdc									
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 (tan δ)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V
	tan δ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20℃, 120Hz)									
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	80V	100V
	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
	(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 (the peak voltage shall not exceed the rated voltage) for the specified period of time at 105℃.									
	Rated Voltage(Vdc)	6.3 to 10Vdc						16 to 100Vdc		
	Time	8,000hours						10,000hours		
	Capacitance change	≦±30% of the initial value						≦±25% of the initial value		
	D.F. (tan δ)	≦200% of the initial specified value						≦200% of the initial specified value		
	Leakage current	≦The initial specified value						≦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. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.									
	Capacitance change	≦±25% of the initial value								
	D.F. (tan δ)	≦200% of the initial specified value								
	Leakage current	≦The initial specified value								

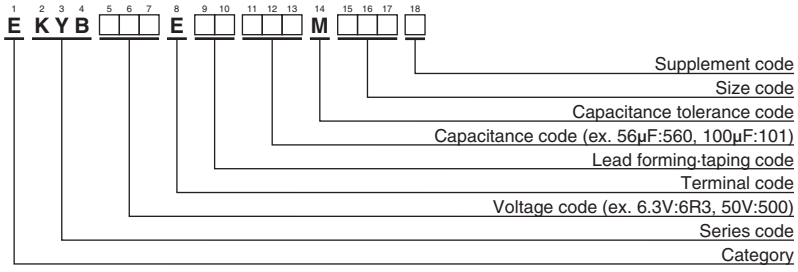
◆DIMENSIONS [mm]

●Terminal Code : E



φD	10	12.5	16	18
φd	0.6	0.6	0.8	0.8
F	5.0	5.0	7.5	7.5
φD'	φD+0.5max.			
L'	L+1.5max.			

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

KYB Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz) 20℃	Impedance (Ω max./100kHz) -10℃	Rated ripple current (mArms/105℃, 100kHz)	Part No.
6.3	1,200	10×12.5	0.064	0.26	1,050	EKYB6R3E□□122MJC5S
	1,800	10×16	0.049	0.20	1,400	EKYB6R3E□□182MJ16S
	2,200	10×20	0.037	0.15	1,650	EKYB6R3E□□222MJ20S
	2,700	10×25	0.031	0.13	1,910	EKYB6R3E□□272MJ25S
	3,300	10×30	0.027	0.11	2,230	EKYB6R3E□□332MJ30S
	3,900	12.5×20	0.027	0.11	2,230	EKYB6R3E□□392MK20S
	4,700	12.5×25	0.024	0.096	2,530	EKYB6R3E□□472MK25S
	6,800	12.5×30	0.021	0.084	2,860	EKYB6R3E□□682MK30S
	6,800	16×20	0.025	0.10	2,610	EKYB6R3E□□682ML20S
	8,200	12.5×35	0.018	0.072	3,140	EKYB6R3E□□822MK35S
	8,200	18×20	0.021	0.084	3,000	EKYB6R3E□□822MM20S
	10,000	12.5×40	0.017	0.068	3,640	EKYB6R3E□□103MK40S
	10,000	16×25	0.020	0.080	3,140	EKYB6R3E□□103ML25S
	12,000	16×31.5	0.016	0.064	3,610	EKYB6R3E□□123MLN3S
	12,000	18×25	0.017	0.068	3,530	EKYB6R3E□□123MM25S
	15,000	16×35.5	0.014	0.056	4,080	EKYB6R3E□□153MLP1S
	15,000	18×31.5	0.014	0.056	4,220	EKYB6R3E□□153MMN3S
	18,000	16×40	0.013	0.052	4,220	EKYB6R3E□□183ML40S
	18,000	18×35.5	0.012	0.048	4,280	EKYB6R3E□□183MMP1S
	22,000	18×40	0.011	0.044	4,700	EKYB6R3E□□223MM40S
10	1,000	10×12.5	0.064	0.26	1,050	EKYB100E□□102MJC5S
	1,200	10×16	0.049	0.20	1,400	EKYB100E□□122MJ16S
	1,800	10×20	0.037	0.15	1,650	EKYB100E□□182MJ20S
	2,200	10×25	0.031	0.13	1,910	EKYB100E□□222MJ25S
	2,700	10×30	0.027	0.11	2,230	EKYB100E□□272MJ30S
	2,700	12.5×20	0.027	0.11	2,230	EKYB100E□□272MK20S
	3,900	12.5×25	0.024	0.096	2,530	EKYB100E□□392MK25S
	4,700	12.5×30	0.021	0.084	2,860	EKYB100E□□472MK30S
	4,700	16×20	0.025	0.10	2,610	EKYB100E□□472ML20S
	5,600	12.5×35	0.018	0.072	3,140	EKYB100E□□562MK35S
	6,800	12.5×40	0.017	0.068	3,640	EKYB100E□□682MK40S
	6,800	16×25	0.020	0.080	3,140	EKYB100E□□682ML25S
	6,800	18×20	0.021	0.084	3,000	EKYB100E□□682MM20S
	8,200	16×31.5	0.016	0.064	3,610	EKYB100E□□822MLN3S
	8,200	18×25	0.017	0.068	3,530	EKYB100E□□822MM25S
	10,000	16×35.5	0.014	0.056	4,080	EKYB100E□□103MLP1S
	10,000	18×31.5	0.014	0.056	4,220	EKYB100E□□103MMN3S
	12,000	16×40	0.013	0.052	4,220	EKYB100E□□123ML40S
	12,000	18×35.5	0.012	0.048	4,280	EKYB100E□□123MMP1S
	15,000	18×40	0.011	0.044	4,700	EKYB100E□□153MM40S
16	680	10×12.5	0.064	0.26	1,050	EKYB160E□□681MJC5S
	1,000	10×16	0.049	0.20	1,400	EKYB160E□□102MJ16S
	1,500	10×20	0.037	0.15	1,650	EKYB160E□□152MJ20S
	1,800	10×25	0.031	0.13	1,910	EKYB160E□□182MJ25S
	2,200	10×30	0.027	0.11	2,230	EKYB160E□□222MJ30S
	2,200	12.5×20	0.027	0.11	2,230	EKYB160E□□222MK20S
	3,300	12.5×25	0.024	0.096	2,530	EKYB160E□□332MK25S
	3,900	12.5×30	0.021	0.084	2,860	EKYB160E□□392MK30S
	3,900	16×20	0.025	0.10	2,610	EKYB160E□□392ML20S
	4,700	12.5×35	0.018	0.072	3,140	EKYB160E□□472MK35S

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz) 20℃	Impedance (Ω max./100kHz) -10℃	Rated ripple current (mArms/105℃, 100kHz)	Part No.
16	4,700	18×20	0.021	0.084	3,000	EKYB160E□□472MM20S
	5,600	12.5×40	0.017	0.068	3,640	EKYB160E□□562MK40S
	5,600	16×25	0.020	0.080	3,140	EKYB160E□□562ML25S
	6,800	16×31.5	0.016	0.064	3,610	EKYB160E□□682MLN3S
	6,800	18×25	0.017	0.068	3,530	EKYB160E□□682MM25S
	8,200	16×35.5	0.014	0.056	4,080	EKYB160E□□822MLP1S
	8,200	18×31.5	0.014	0.056	4,220	EKYB160E□□822MMN3S
	10,000	16×40	0.013	0.052	4,220	EKYB160E□□103ML40S
	10,000	18×35.5	0.012	0.048	4,280	EKYB160E□□103MMP1S
	12,000	18×40	0.011	0.044	4,700	EKYB160E□□123MM40S
25	470	10×12.5	0.064	0.26	1,050	EKYB250E□□471MJC5S
	680	10×16	0.049	0.20	1,400	EKYB250E□□681MJ16S
	1,000	10×20	0.037	0.15	1,650	EKYB250E□□102MJ20S
	1,200	10×25	0.031	0.13	1,910	EKYB250E□□122MJ25S
	1,500	10×30	0.027	0.11	2,230	EKYB250E□□152MJ30S
	1,500	12.5×20	0.027	0.11	2,230	EKYB250E□□152MK20S
	2,200	12.5×25	0.024	0.096	2,530	EKYB250E□□222MK25S
	2,700	12.5×30	0.021	0.084	2,860	EKYB250E□□272MK30S
	2,700	16×20	0.025	0.10	2,610	EKYB250E□□272ML20S
	3,300	12.5×35	0.018	0.072	3,140	EKYB250E□□332MK35S
	3,300	18×20	0.021	0.084	3,000	EKYB250E□□332MM20S
	3,900	12.5×40	0.017	0.068	3,640	EKYB250E□□392MK40S
	3,900	16×25	0.020	0.080	3,140	EKYB250E□□392ML25S
	4,700	16×31.5	0.016	0.064	3,610	EKYB250E□□472MLN3S
	4,700	18×25	0.017	0.068	3,530	EKYB250E□□472MM25S
	5,600	16×35.5	0.014	0.056	4,080	EKYB250E□□562MLP1S
	6,800	16×40	0.013	0.052	4,220	EKYB250E□□682ML40S
	6,800	18×31.5	0.014	0.056	4,220	EKYB250E□□682MMN3S
	8,200	18×35.5	0.012	0.048	4,280	EKYB250E□□822MMP1S
35	330	10×12.5	0.064	0.26	1,050	EKYB350E□□331MJC5S
	470	10×16	0.049	0.20	1,400	EKYB350E□□471MJ16S
	680	10×20	0.037	0.15	1,650	EKYB350E□□681MJ20S
	820	10×25	0.031	0.13	1,910	EKYB350E□□821MJ25S
	1,000	10×30	0.027	0.11	2,230	EKYB350E□□102MJ30S
	1,000	12.5×20	0.027	0.11	2,230	EKYB350E□□102MK20S
	1,500	12.5×25	0.024	0.096	2,530	EKYB350E□□152MK25S
	1,800	12.5×30	0.021	0.084	2,860	EKYB350E□□182MK30S
	1,800	16×20	0.025	0.10	2,610	EKYB350E□□182ML20S
	2,200	12.5×35	0.018	0.072	3,140	EKYB350E□□222MK35S
	2,200	18×20	0.021	0.084	3,000	EKYB350E□□222MM20S
	2,700	12.5×40	0.017	0.068	3,640	EKYB350E□□272MK40S
	2,700	16×25	0.020	0.080	3,140	EKYB350E□□272ML25S
	3,300	16×31.5	0.016	0.064	3,610	EKYB350E□□332MLN3S
	3,300	18×25	0.017	0.068	3,530	EKYB350E□□332MM25S
	3,900	16×35.5	0.014	0.056	4,080	EKYB350E□□392MLP1S
	4,700	16×40	0.013	0.052	4,220	EKYB350E□□472ML40S
	4,700	18×31.5	0.014	0.056	4,220	EKYB350E□□472MMN3S
	5,600	18×35.5	0.012	0.048	4,280	EKYB350E□□562MMP1S

□□ : Enter the appropriate lead forming or taping code.

KYB Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz) 20℃	Impedance (Ω max./100kHz) -10℃	Rated ripple current (mArms/105℃, 100kHz)	Part No.
50	150	10×12.5	0.10	0.40	810	EKYB500E□□151MJC5S
	220	10×16	0.069	0.28	1,100	EKYB500E□□221MJ16S
	270	10×20	0.055	0.22	1,300	EKYB500E□□271MJ20S
	390	10×25	0.043	0.18	1,600	EKYB500E□□391MJ25S
	470	10×30	0.038	0.16	1,820	EKYB500E□□471MJ30S
	470	12.5×20	0.034	0.14	1,820	EKYB500E□□471MK20S
	680	12.5×25	0.030	0.12	2,100	EKYB500E□□681MK25S
	820	12.5×30	0.025	0.10	2,450	EKYB500E□□821MK30S
	820	16×20	0.028	0.12	2,350	EKYB500E□□821ML20S
	1,000	12.5×35	0.021	0.084	2,800	EKYB500E□□102MK35S
	1,000	18×20	0.025	0.10	2,600	EKYB500E□□102MM20S
	1,200	12.5×40	0.019	0.076	3,100	EKYB500E□□122MK40S
	1,200	16×25	0.024	0.096	2,750	EKYB500E□□122ML25S
	1,500	16×31.5	0.019	0.076	3,150	EKYB500E□□152MLN3S
	1,500	18×25	0.021	0.084	2,890	EKYB500E□□152MM25S
	1,800	16×35.5	0.016	0.064	3,550	EKYB500E□□182MLP1S
	2,200	16×40	0.014	0.056	3,900	EKYB500E□□222ML40S
	2,200	18×31.5	0.014	0.056	3,800	EKYB500E□□222MMN3S
	2,700	18×35.5	0.013	0.052	4,100	EKYB500E□□272MMP1S
63	120	10×12.5	0.11	0.44	725	EKYB630E□□121MJC5S
	180	10×16	0.073	0.30	1,050	EKYB630E□□181MJ16S
	220	10×20	0.055	0.22	1,300	EKYB630E□□221MJ20S
	330	10×25	0.045	0.18	1,550	EKYB630E□□331MJ25S
	390	10×30	0.040	0.16	1,780	EKYB630E□□391MJ30S
	390	12.5×20	0.036	0.15	1,780	EKYB630E□□391MK20S
	560	12.5×25	0.030	0.12	2,100	EKYB630E□□561MK25S
	680	12.5×30	0.026	0.11	2,415	EKYB630E□□681MK30S
	680	16×20	0.028	0.12	2,250	EKYB630E□□681ML20S
	820	12.5×35	0.022	0.088	2,700	EKYB630E□□821MK35S
	820	18×20	0.028	0.12	2,500	EKYB630E□□821MM20S
	1,000	12.5×40	0.020	0.080	3,000	EKYB630E□□102MK40S
	1,000	16×25	0.025	0.10	2,730	EKYB630E□□102ML25S
	1,200	16×31.5	0.020	0.080	3,000	EKYB630E□□122MLN3S
	1,200	18×25	0.022	0.088	2,800	EKYB630E□□122MM25S
	1,500	16×35.5	0.018	0.072	3,200	EKYB630E□□152MLP1S
	1,500	18×31.5	0.018	0.072	3,300	EKYB630E□□152MMN3S
	1,800	16×40	0.016	0.064	3,590	EKYB630E□□182ML40S
	1,800	18×35.5	0.017	0.068	3,570	EKYB630E□□182MMP1S
	2,200	18×40	0.016	0.064	3,670	EKYB630E□□222MM40S
80	82	10×12.5	0.14	0.56	624	EKYB800E□□820MJC5S
	120	10×16	0.10	0.40	780	EKYB800E□□121MJ16S
	180	10×20	0.075	0.30	1,040	EKYB800E□□181MJ20S
	220	10×25	0.060	0.24	1,170	EKYB800E□□221MJ25S
	270	10×30	0.053	0.22	1,350	EKYB800E□□271MJ30S
	270	12.5×20	0.048	0.20	1,430	EKYB800E□□271MK20S
	390	12.5×25	0.039	0.16	1,620	EKYB800E□□391MK25S
	470	12.5×30	0.033	0.14	1,950	EKYB800E□□471MK30S
	470	16×20	0.036	0.15	1,750	EKYB800E□□471ML20S
	560	12.5×35	0.026	0.11	2,250	EKYB800E□□561MK35S
	560	18×20	0.032	0.13	2,100	EKYB800E□□561MM20S
	680	12.5×40	0.024	0.096	2,450	EKYB800E□□681MK40S
	680	16×25	0.028	0.12	2,250	EKYB800E□□681ML25S
	820	16×31.5	0.022	0.088	2,400	EKYB800E□□821MLN3S
	820	18×25	0.027	0.11	2,270	EKYB800E□□821MM25S
	1,000	16×35.5	0.020	0.080	2,600	EKYB800E□□102MLP1S
	1,200	16×40	0.018	0.072	2,900	EKYB800E□□122ML40S
	1,200	18×31.5	0.020	0.080	2,550	EKYB800E□□122MMN3S
	1,500	18×35.5	0.018	0.072	3,050	EKYB800E□□152MMP1S
100	56	10×12.5	0.14	0.56	624	EKYB101E□□560MJC5S
	82	10×16	0.10	0.40	780	EKYB101E□□820MJ16S
	100	10×20	0.075	0.30	1,040	EKYB101E□□101MJ20S
	120	10×25	0.060	0.24	1,170	EKYB101E□□121MJ25S
	150	10×30	0.053	0.22	1,350	EKYB101E□□151MJ30S
	180	12.5×20	0.048	0.20	1,430	EKYB101E□□181MK20S
	220	12.5×25	0.039	0.16	1,620	EKYB101E□□221MK25S
	270	12.5×30	0.033	0.14	1,950	EKYB101E□□271MK30S
	270	16×20	0.036	0.15	1,750	EKYB101E□□271ML20S
	330	16×25	0.028	0.12	2,250	EKYB101E□□331ML25S
	390	12.5×35	0.026	0.11	2,250	EKYB101E□□391MK35S
	390	18×20	0.032	0.13	2,100	EKYB101E□□391MM20S
	470	12.5×40	0.024	0.096	2,450	EKYB101E□□471MK40S
	470	16×31.5	0.022	0.088	2,400	EKYB101E□□471MLN3S
	560	16×35.5	0.020	0.080	2,600	EKYB101E□□561MLP1S
	560	18×25	0.027	0.11	2,270	EKYB101E□□561MM25S
	680	16×40	0.018	0.072	2,900	EKYB101E□□681ML40S
	680	18×31.5	0.020	0.080	2,550	EKYB101E□□681MMN3S
	820	18×35.5	0.018	0.072	3,050	EKYB101E□□821MMP1S
	1,000	18×40	0.017	0.068	3,510	EKYB101E□□102MM40S

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

◉Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
56 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

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

■ Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.

■ Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.

■ The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.

■ The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.

■ We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.

■ We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products

■ We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

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