

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°C
- Non solvent resistant type
- RoHS2 Compliant

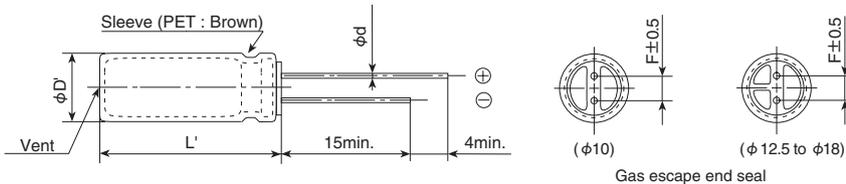


SPECIFICATIONS

Items	Characteristics										
Category	-40 to +105°C										
Temperature Range	-40 to +105°C										
Rated Voltage Range	6.3 to 100V _{dc}										
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
Leakage Current	I=0.01CV or 3μA, whichever is greater. (at 20°C after 2 minutes) Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)										
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	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°C, 120Hz)											
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	
	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	
(at 120Hz)											
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C 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°C.										
	Rated Voltage(V _{dc})	6.3 to 10V _{dc}					16 to 100V _{dc}				
	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°C after exposing them for 500 hours at 105°C 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									

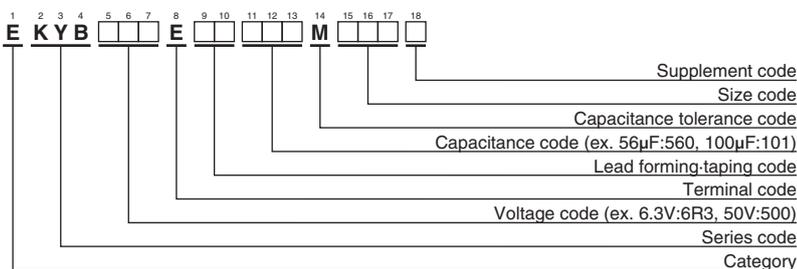
DIMENSIONS [mm]

● 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 (V _{dc})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA rms/105°C, 100kHz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA rms/105°C, 100kHz)	Part No.		
			20°C	-10°C						20°C	-10°C				
6.3	1,200	10×12.5	0.064	0.26	1,050	EKYB6R3E□□122MJC5S	16	4,700	18×20	0.021	0.084	3,000	EKYB160E□□472MM20S		
	1,800	10×16	0.049	0.20	1,400	EKYB6R3E□□182MJ16S		5,600	12.5×40	0.017	0.068	3,640	EKYB160E□□562MK40S		
	2,200	10×20	0.037	0.15	1,650	EKYB6R3E□□222MJ20S		5,600	16×25	0.020	0.080	3,140	EKYB160E□□562ML25S		
	2,700	10×25	0.031	0.13	1,910	EKYB6R3E□□272MJ25S		6,800	16×31.5	0.016	0.064	3,610	EKYB160E□□682MLN3S		
	3,300	10×30	0.027	0.11	2,230	EKYB6R3E□□332MJ30S		6,800	18×25	0.017	0.068	3,530	EKYB160E□□682MM25S		
	3,900	12.5×20	0.027	0.11	2,230	EKYB6R3E□□392MK20S		8,200	16×35.5	0.014	0.056	4,080	EKYB160E□□822MLP1S		
	4,700	12.5×25	0.024	0.096	2,530	EKYB6R3E□□472MK25S		8,200	18×31.5	0.014	0.056	4,220	EKYB160E□□822MMN3S		
	6,800	12.5×30	0.021	0.084	2,860	EKYB6R3E□□682MK30S		10,000	16×40	0.013	0.052	4,220	EKYB160E□□103ML40S		
	6,800	16×20	0.025	0.10	2,610	EKYB6R3E□□682ML20S		10,000	18×35.5	0.012	0.048	4,280	EKYB160E□□103MMP1S		
	8,200	12.5×35	0.018	0.072	3,140	EKYB6R3E□□822MK35S		12,000	18×40	0.011	0.044	4,700	EKYB160E□□123MM40S		
	8,200	18×20	0.021	0.084	3,000	EKYB6R3E□□822MM20S		25	470	10×12.5	0.064	0.26	1,050	EKYB250E□□471MJC5S	
	10,000	12.5×40	0.017	0.068	3,640	EKYB6R3E□□103MK40S			680	10×16	0.049	0.20	1,400	EKYB250E□□681MJ16S	
	10,000	16×25	0.020	0.080	3,140	EKYB6R3E□□103ML25S			1,000	10×20	0.037	0.15	1,650	EKYB250E□□102MJ20S	
	12,000	16×31.5	0.016	0.064	3,610	EKYB6R3E□□123MLN3S			1,200	10×25	0.031	0.13	1,910	EKYB250E□□122MJ25S	
	12,000	18×25	0.017	0.068	3,530	EKYB6R3E□□123MM25S			1,500	10×30	0.027	0.11	2,230	EKYB250E□□152MJ30S	
	15,000	16×35.5	0.014	0.056	4,080	EKYB6R3E□□153MMLP1S			1,500	12.5×20	0.027	0.11	2,230	EKYB250E□□152MK20S	
	15,000	18×31.5	0.014	0.056	4,220	EKYB6R3E□□153MMN3S			2,200	12.5×25	0.024	0.096	2,530	EKYB250E□□222MK25S	
	18,000	16×40	0.013	0.052	4,220	EKYB6R3E□□183ML40S			2,700	12.5×30	0.021	0.084	2,860	EKYB250E□□272MK30S	
	18,000	18×35.5	0.012	0.048	4,280	EKYB6R3E□□183MMP1S			2,700	16×20	0.025	0.10	2,610	EKYB250E□□272ML20S	
	22,000	18×40	0.011	0.044	4,700	EKYB6R3E□□223MM40S			3,300	12.5×35	0.018	0.072	3,140	EKYB250E□□332MK35S	
	10	1,000	10×12.5	0.064	0.26	1,050			EKYB100E□□102MJC5S	3,300	18×20	0.021	0.084	3,000	EKYB250E□□332MM20S
		1,200	10×16	0.049	0.20	1,400			EKYB100E□□122MJ16S	3,900	12.5×40	0.017	0.068	3,640	EKYB250E□□392MK40S
1,800		10×20	0.037	0.15	1,650	EKYB100E□□182MJ20S	3,900		16×25	0.020	0.080	3,140	EKYB250E□□392ML25S		
2,200		10×25	0.031	0.13	1,910	EKYB100E□□222MJ25S	4,700		16×31.5	0.016	0.064	3,610	EKYB250E□□472MLN3S		
2,700		10×30	0.027	0.11	2,230	EKYB100E□□272MJ30S	4,700		18×25	0.017	0.068	3,530	EKYB250E□□472MM25S		
2,700		12.5×20	0.027	0.11	2,230	EKYB100E□□272MK20S	5,600		16×35.5	0.014	0.056	4,080	EKYB250E□□562MLP1S		
3,900		12.5×25	0.024	0.096	2,530	EKYB100E□□392MK25S	6,800		16×40	0.013	0.052	4,220	EKYB250E□□682ML40S		
4,700		12.5×30	0.021	0.084	2,860	EKYB100E□□472MK30S	6,800		18×31.5	0.014	0.056	4,220	EKYB250E□□682MMN3S		
4,700		16×20	0.025	0.10	2,610	EKYB100E□□472ML20S	8,200		18×35.5	0.012	0.048	4,280	EKYB250E□□822MMP1S		
5,600		12.5×35	0.018	0.072	3,140	EKYB100E□□562MK35S	35		330	10×12.5	0.064	0.26	1,050	EKYB350E□□331MJC5S	
6,800		12.5×40	0.017	0.068	3,640	EKYB100E□□682MK40S			470	10×16	0.049	0.20	1,400	EKYB350E□□471MJ16S	
6,800		16×25	0.020	0.080	3,140	EKYB100E□□682ML25S			680	10×20	0.037	0.15	1,650	EKYB350E□□681MJ20S	
6,800		18×20	0.021	0.084	3,000	EKYB100E□□682MM20S		820	10×25	0.031	0.13	1,910	EKYB350E□□821MJ25S		
8,200		16×31.5	0.016	0.064	3,610	EKYB100E□□822MLN3S		1,000	10×30	0.027	0.11	2,230	EKYB350E□□102MJ30S		
8,200		18×25	0.017	0.068	3,530	EKYB100E□□822MM25S		1,000	12.5×20	0.027	0.11	2,230	EKYB350E□□102MK20S		
10,000		16×35.5	0.014	0.056	4,080	EKYB100E□□103MMLP1S		1,500	12.5×25	0.024	0.096	2,530	EKYB350E□□152MK25S		
10,000		18×31.5	0.014	0.056	4,220	EKYB100E□□103MMN3S		1,800	12.5×30	0.021	0.084	2,860	EKYB350E□□182MK30S		
12,000		16×40	0.013	0.052	4,220	EKYB100E□□123ML40S		1,800	16×20	0.025	0.10	2,610	EKYB350E□□182ML20S		
12,000		18×35.5	0.012	0.048	4,280	EKYB100E□□123MMP1S		2,200	12.5×35	0.018	0.072	3,140	EKYB350E□□222MK35S		
15,000		18×40	0.011	0.044	4,700	EKYB100E□□153MM40S		2,200	18×20	0.021	0.084	3,000	EKYB350E□□222MM20S		
16		680	10×12.5	0.064	0.26	1,050		EKYB160E□□681MJC5S	2,700	12.5×40	0.017	0.068	3,640	EKYB350E□□272MK40S	
		1,000	10×16	0.049	0.20	1,400		EKYB160E□□102MJ16S	2,700	16×25	0.020	0.080	3,140	EKYB350E□□272ML25S	
	1,500	10×20	0.037	0.15	1,650	EKYB160E□□152MJ20S		3,300	16×31.5	0.016	0.064	3,610	EKYB350E□□332MLN3S		
	1,800	10×25	0.031	0.13	1,910	EKYB160E□□182MJ25S		3,300	18×25	0.017	0.068	3,530	EKYB350E□□332MM25S		
	2,200	10×30	0.027	0.11	2,230	EKYB160E□□222MJ30S		3,900	16×35.5	0.014	0.056	4,080	EKYB350E□□392MLP1S		
	2,200	12.5×20	0.027	0.11	2,230	EKYB160E□□222MK20S		4,700	16×40	0.013	0.052	4,220	EKYB350E□□472ML40S		
	3,300	12.5×25	0.024	0.096	2,530	EKYB160E□□332MK25S		4,700	18×31.5	0.014	0.056	4,220	EKYB350E□□472MMN3S		
	3,900	12.5×30	0.021	0.084	2,860	EKYB160E□□392MK30S		5,600	18×35.5	0.012	0.048	4,280	EKYB350E□□562MMP1S		
	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									

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



KYB Series

◆STANDARD RATINGS

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

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

[Available Items by Manufacturing Locations](#)

[Environmental Measures](#)

[Technical Note](#)

[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

[Taping, Lead-preforming and Packaging](#)

[Available Terminals for Snap-in and Screw Mount Type](#)