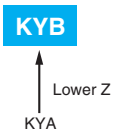
KYB Series

- Low impedance, high ripple and long life from KYA series
- Newly innovative electrolyte is employed to minimize impedance
- Endurance with ripple current : 4,000 to 10,000 hours at 105℃
- Non solvent resistant type
- RoHS2 Compliant

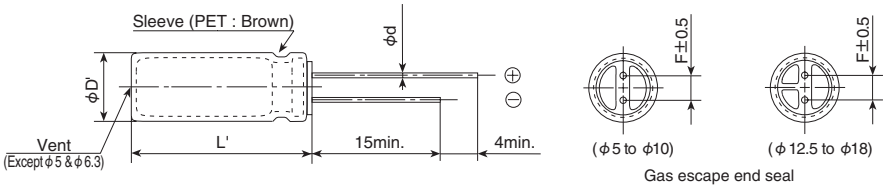


◆SPECIFICATIONS

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	φ5: 4,000hours φ6.3 & 8: 6,000hours φ10 to 18: 8,000hours					φ5: 5,000hours φ6.3 & 8: 7,000hours φ10 to 18: 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								

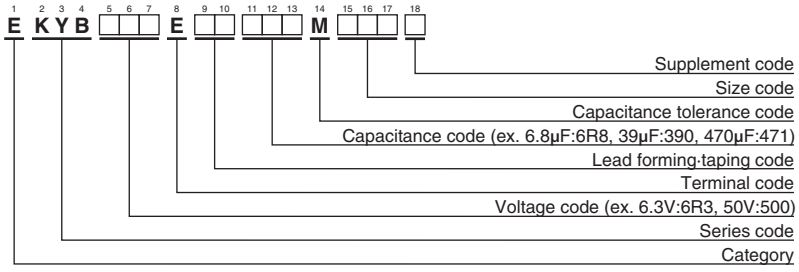
◆DIMENSIONS [mm]

●Terminal Code : E



φD	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



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	180	5×11	0.29	1.2	340	EKYB6R3E□□181ME11D
	390	6.3×11	0.15	0.60	540	EKYB6R3E□□391MF11D
	820	8×11.5	0.087	0.35	840	EKYB6R3E□□821MHB5D
	1,200	8×15	0.069	0.28	1,050	EKYB6R3E□□122MH15D
	1,200	10×12.5	0.064	0.26	1,050	EKYB6R3E□□122MJC5S
	1,500	8×20	0.060	0.24	1,210	EKYB6R3E□□152MH20D
	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	120	5×11	0.29	1.2	340	EKYB100E□□121ME11D
	330	6.3×11	0.15	0.60	540	EKYB100E□□331MF11D
	560	8×11.5	0.087	0.35	840	EKYB100E□□561MHB5D
	820	8×15	0.069	0.28	1,050	EKYB100E□□821MH15D
	1,000	8×20	0.060	0.24	1,210	EKYB100E□□102MH20D
	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	120	5×11	0.29	1.2	340	EKYB160E□□121ME11D
	270	6.3×11	0.15	0.60	540	EKYB160E□□271MF11D
	470	8×11.5	0.087	0.35	840	EKYB160E□□471MHB5D
	680	8×15	0.069	0.28	1,050	EKYB160E□□681MH15D
	680	10×12.5	0.064	0.26	1,050	EKYB160E□□681MJC5S
	820	8×20	0.060	0.24	1,210	EKYB160E□□821MH20D
	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
16	4,700	12.5×35	0.018	0.072	3,140	EKYB160E□□472MK35S
	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	82	5×11	0.29	1.2	340	EKYB250E□□820ME11D
	150	6.3×11	0.15	0.60	540	EKYB250E□□151MF11D
	330	8×11.5	0.087	0.35	840	EKYB250E□□331MHB5D
	390	8×15	0.069	0.28	1,050	EKYB250E□□391MH15D
	470	10×12.5	0.064	0.26	1,050	EKYB250E□□471MJC5S
	560	8×20	0.060	0.24	1,210	EKYB250E□□561MH20D
	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	47	5×11	0.29	1.2	340	EKYB350E□□470ME11D
	100	6.3×11	0.15	0.60	540	EKYB350E□□101MF11D
	180	8×11.5	0.087	0.35	840	EKYB350E□□181MHB5D
	270	8×15	0.069	0.28	1,050	EKYB350E□□271MH15D
	330	8×20	0.060	0.24	1,210	EKYB350E□□331MH20D
	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
50	27	5×11	0.48	2.0	238	EKYB500E□□270ME11D
	56	6.3×11	0.20	0.80	385	EKYB500E□□560MF11D
	100	8×11.5	0.12	0.48	620	EKYB500E□□101MHB5D
	150	8×15	0.093	0.38	810	EKYB500E□□151MH15D
	150	10×12.5	0.10	0.40	810	EKYB500E□□151MJC5S

□□ : 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	180	8×20	0.075	0.30	980	EKYB500E□□181MH20D
	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	18	5×11	0.50	2.0	220	EKYB630E□□180ME11D
	33	6.3×11	0.25	1.0	350	EKYB630E□□330MF11D
	56	8×11.5	0.16	0.64	530	EKYB630E□□560MHB5D
	82	8×15	0.12	0.48	700	EKYB630E□□820MH15D
	120	8×20	0.085	0.34	880	EKYB630E□□121MH20D
	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	12	5×11	0.80	3.2	163	EKYB800E□□120ME11D
	22	6.3×11	0.43	1.8	267	EKYB800E□□220MF11D
	39	8×11.5	0.18	0.72	462	EKYB800E□□390MHB5D
	56	8×15	0.14	0.56	585	EKYB800E□□560MH15D
	82	8×20	0.11	0.44	735	EKYB800E□□820MH20D
	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	6.8	5×11	0.80	3.2	163	EKYB101E□□6R8ME11D
	15	6.3×11	0.43	1.8	267	EKYB101E□□150MF11D
	27	8×11.5	0.18	0.72	462	EKYB101E□□270MHB5D
	39	8×15	0.14	0.56	585	EKYB101E□□390MH15D
	56	8×20	0.11	0.44	735	EKYB101E□□560MH20D
	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
6.8 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 endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.