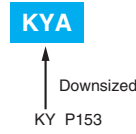


# KYA Series

- Downsized from KY series
- Newly innovative electrolyte is employed to minimize impedance
- Endurance with ripple current : 4,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS Compliant

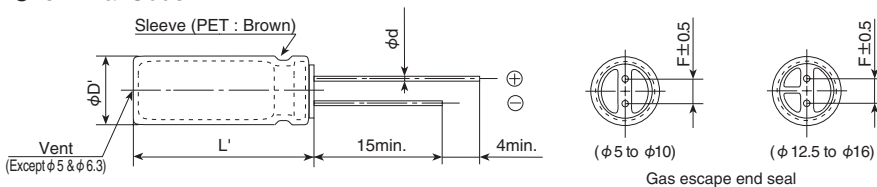


## ◆ SPECIFICATIONS

Items	Characteristics									
Category	Temperature Range									
Category	-40 to +105°C									
Rated Voltage Range	6.3 to 100V <sub>dc</sub>									
Capacitance Tolerance	±20% (M) (at 20°C, 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°C after 2 minutes)									
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	100V	
	tan δ (Max)	0.22	0.19	0.16	0.14	0.12	0.10	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 <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	100V	
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	
	Z(-40°C)/Z(+20°C)	8	6	4	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.									
	Time	6.3 to 10V <sub>dc</sub>	φ 5 & 6.3 : 4,000hours		φ 8 & 10 : 6,000hours		φ 12.5 to 16 : 8,000hours			
		16 to 100V <sub>dc</sub>	φ 5 & 6.3 : 5,000hours		φ 8 & 10 : 7,000hours		φ 12.5 to 16 : 10,000hours			
	Capacitance change	≤ ±25% of the initial value								
	D.F. (tan δ)	≤ 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°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								

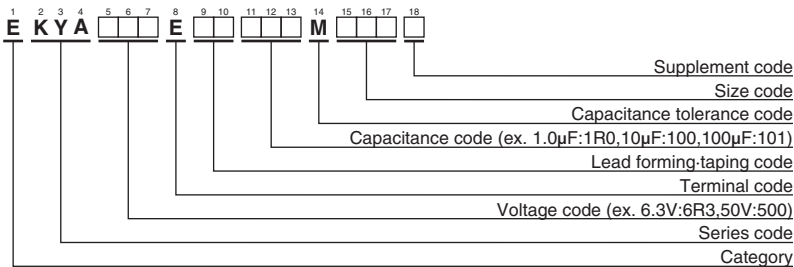
## ◆ DIMENSIONS [mm]

- Terminal Code : E



φD	5	6.3	8	10	12.5	16
φd	0.5	0.5	0.6	0.6	0.6	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5
φD'	φD+0.5max.					
L'	L+1.5max.					

## ◆ PART NUMBERING SYSTEM



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

◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.	
			20°C	-10°C						20°C	-10°C			
6.3	100	5×11	0.90	3.6	150	EKYA6R3E□□101ME11D	25	3,300	16×25	0.021	0.060	2,930	EKYA250E□□332ML25S	
	180	5×11	0.40	1.6	250	EKYA6R3E□□181ME11D		3,900	16×25	0.021	0.060	2,930	EKYA250E□□392ML25S	
	220	5×11	0.40	1.6	250	EKYA6R3E□□221ME11D		4,700	16×31.5	0.017	0.050	3,450	EKYA250E□□472MLN3S	
	330	6.3×11	0.22	0.87	400	EKYA6R3E□□331MF11D		5,600	16×35.5	0.015	0.044	3,610	EKYA250E□□562MLP1S	
	470	6.3×11	0.22	0.87	400	EKYA6R3E□□471MF11D		35	33	5×11	0.40	1.6	250	EKYA350E□□330ME11D
	820	8×11.5	0.13	0.52	640	EKYA6R3E□□821MHB5D			47	5×11	0.40	1.6	250	EKYA350E□□470ME11D
	1,200	10×12.5	0.080	0.32	865	EKYA6R3E□□122MJC5S			100	6.3×11	0.22	0.87	400	EKYA350E□□101MF11D
	1,200	8×15	0.087	0.35	840	EKYA6R3E□□122MH15D			220	8×11.5	0.13	0.52	640	EKYA350E□□221MHB5D
	1,500	8×20	0.069	0.27	1,050	EKYA6R3E□□152MH20D			270	8×15	0.087	0.35	840	EKYA350E□□271MH15D
	1,800	10×16	0.060	0.24	1,300	EKYA6R3E□□182MJ16S			330	10×12.5	0.080	0.32	865	EKYA350E□□331MJC5S
	2,700	10×20	0.046	0.18	1,400	EKYA6R3E□□272MJ20S			390	8×20	0.069	0.27	1,050	EKYA350E□□391MHB5D
	3,300	10×25	0.042	0.17	1,650	EKYA6R3E□□332MJ25S			470	10×16	0.060	0.24	1,300	EKYA350E□□471MJ16S
	3,900	12.5×20	0.035	0.12	1,900	EKYA6R3E□□392MK20S			680	10×20	0.046	0.18	1,400	EKYA350E□□681MJ20S
	4,700	12.5×25	0.027	0.089	2,230	EKYA6R3E□□472MK25S			820	10×25	0.042	0.17	1,650	EKYA350E□□821MJ25S
	5,600	12.5×25	0.027	0.089	2,230	EKYA6R3E□□562MK25S			1,000	12.5×20	0.035	0.12	1,900	EKYA350E□□102MK20S
	10,000	16×25	0.021	0.060	2,930	EKYA6R3E□□103ML25S			1,500	12.5×25	0.027	0.089	2,230	EKYA350E□□152MK25S
	12,000	16×31.5	0.017	0.050	3,450	EKYA6R3E□□123MLN3S			2,200	16×25	0.021	0.060	2,930	EKYA350E□□222ML25S
15,000	16×35.5	0.015	0.044	3,610	EKYA6R3E□□153MLP1S	2,700	16×25		0.021	0.060	2,930	EKYA350E□□272ML25S		
10	100	5×11	0.90	3.6	150	EKYA100E□□101ME11D	3,300		16×31.5	0.017	0.050	3,450	EKYA350E□□332MLN3S	
	120	5×11	0.40	1.6	250	EKYA100E□□121ME11D	3,900		16×35.5	0.015	0.044	3,610	EKYA350E□□392MLP1S	
	330	6.3×11	0.22	0.87	400	EKYA100E□□331MF11D	50		1.0	5×11	4.0	16	30	EKYA500E□□1R0ME11D
	560	8×11.5	0.13	0.52	640	EKYA100E□□561MHB5D		2.2	5×11	2.5	10	43	EKYA500E□□2R2ME11D	
	820	8×15	0.087	0.35	840	EKYA100E□□821MH15D		3.3	5×11	2.2	8.8	53	EKYA500E□□3R3ME11D	
	820	10×12.5	0.080	0.32	865	EKYA100E□□821MJC5S		4.7	5×11	1.9	7.6	88	EKYA500E□□4R7ME11D	
	1,000	10×12.5	0.080	0.32	865	EKYA100E□□102MJC5S		10	5×11	1.5	6.0	100	EKYA500E□□100ME11D	
	1,200	8×20	0.069	0.27	1,050	EKYA100E□□122MH20D		22	5×11	0.70	2.8	180	EKYA500E□□220ME11D	
	1,200	10×16	0.060	0.24	1,300	EKYA100E□□122MJ16S		27	5×11	0.70	2.8	250	EKYA500E□□270ME11D	
	1,800	10×20	0.046	0.18	1,400	EKYA100E□□182MJ20S		47	6.3×11	0.30	1.2	295	EKYA500E□□470MF11D	
	2,200	10×25	0.042	0.17	1,650	EKYA100E□□222MJ25S		56	6.3×11	0.30	1.2	295	EKYA500E□□560MF11D	
	3,300	12.5×20	0.035	0.12	1,900	EKYA100E□□332MK20S		100	8×11.5	0.17	0.68	555	EKYA500E□□101MHB5D	
	3,900	12.5×25	0.027	0.089	2,230	EKYA100E□□392MK25S		150	8×15	0.12	0.48	730	EKYA500E□□151MH15D	
6,800	16×25	0.021	0.060	2,930	EKYA100E□□682ML25S	180		10×12.5	0.12	0.48	760	EKYA500E□□181MJC5S		
10,000	16×31.5	0.017	0.050	3,450	EKYA100E□□103MLN3S	180		8×20	0.091	0.36	910	EKYA500E□□181MH20D		
12,000	16×35.5	0.015	0.044	3,610	EKYA100E□□123MLP1S	220	10×16	0.084	0.34	1,050	EKYA500E□□221MJ16S			
16	47	5×11	0.40	1.6	250	EKYA160E□□470ME11D	330	10×20	0.060	0.24	1,220	EKYA500E□□331MJ20S		
	100	5×11	0.40	1.6	250	EKYA160E□□101ME11D	470	10×25	0.055	0.22	1,440	EKYA500E□□471MJ25S		
	220	6.3×11	0.22	0.87	400	EKYA160E□□221MF11D	470	12.5×20	0.045	0.15	1,660	EKYA500E□□471MK20S		
	270	6.3×11	0.22	0.87	400	EKYA160E□□271MF11D	560	12.5×20	0.045	0.15	1,660	EKYA500E□□561MK20S		
	470	8×11.5	0.13	0.52	640	EKYA160E□□471MHB5D	820	12.5×25	0.034	0.11	1,950	EKYA500E□□821MK25S		
	680	8×15	0.087	0.35	840	EKYA160E□□681MH15D	1,000	16×25	0.025	0.075	2,555	EKYA500E□□102ML25S		
	680	10×12.5	0.080	0.32	865	EKYA160E□□681MJC5S	1,200	16×25	0.025	0.075	2,555	EKYA500E□□122ML25S		
	820	8×20	0.069	0.27	1,050	EKYA160E□□821MH20D	1,800	16×31.5	0.022	0.066	3,010	EKYA500E□□182MLN3S		
	1,000	10×16	0.060	0.24	1,300	EKYA160E□□102MJ16S	2,200	16×35.5	0.019	0.057	3,150	EKYA500E□□222MLP1S		
	1,500	10×20	0.046	0.18	1,400	EKYA160E□□152MJ20S	63	10	5×11	0.88	3.5	173	EKYA630E□□100ME11D	
	1,800	10×25	0.042	0.17	1,650	EKYA160E□□182MJ25S		15	5×11	0.88	3.5	173	EKYA630E□□150ME11D	
	2,200	12.5×20	0.035	0.12	1,900	EKYA160E□□222MK20S		33	6.3×11	0.35	1.4	278	EKYA630E□□330MF11D	
	3,300	12.5×25	0.027	0.089	2,230	EKYA160E□□332MK25S		56	8×11.5	0.22	0.88	500	EKYA630E□□560MHB5D	
	4,700	16×25	0.021	0.060	2,930	EKYA160E□□472ML25S		82	8×15	0.16	0.64	665	EKYA630E□□820MH15D	
	5,600	16×25	0.021	0.060	2,930	EKYA160E□□562ML25S		100	10×12.5	0.11	0.44	725	EKYA630E□□101MJC5S	
	6,800	16×31.5	0.017	0.050	3,450	EKYA160E□□682MLN3S		120	8×20	0.12	0.48	820	EKYA630E□□121MH20D	
	8,200	16×31.5	0.017	0.050	3,450	EKYA160E□□822MLN3S		120	10×16	0.076	0.31	950	EKYA630E□□121MJ16S	
10,000	16×35.5	0.015	0.044	3,610	EKYA160E□□103MLP1S	220		10×20	0.056	0.23	1,200	EKYA630E□□221MJ20S		
25	33	5×11	0.40	1.6	250	EKYA250E□□330ME11D		330	10×25	0.046	0.19	1,350	EKYA630E□□331MJ25S	
	47	5×11	0.40	1.6	250	EKYA250E□□470ME11D		330	12.5×20	0.041	0.13	1,570	EKYA630E□□331MK20S	
	68	5×11	0.40	1.6	250	EKYA250E□□680ME11D		390	12.5×20	0.041	0.13	1,570	EKYA630E□□391MK20S	
	150	6.3×11	0.22	0.87	400	EKYA250E□□151MF11D		470	12.5×25	0.031	0.093	1,990	EKYA630E□□471MK25S	
	330	8×11.5	0.13	0.52	640	EKYA250E□□331MHB5D		560	12.5×25	0.031	0.093	1,990	EKYA630E□□561MK25S	
	390	8×15	0.087	0.35	840	EKYA250E□□391MH15D		1,000	16×25	0.025	0.075	2,730	EKYA630E□□102ML25S	
	470	10×12.5	0.080	0.32	865	EKYA250E□□471MJC5S		1,200	16×31.5	0.021	0.063	2,850	EKYA630E□□122MLN3S	
	560	8×20	0.069	0.27	1,050	EKYA250E□□561MH20D		1,500	16×35.5	0.019	0.057	2,900	EKYA630E□□152MLP1S	
	680	10×16	0.060	0.24	1,300	EKYA250E□□681MJ16S	100	1.0	5×11	4.5	15	20	EKYA101E□□1R0ME11D	
	1,000	10×20	0.046	0.18	1,400	EKYA250E□□102MJ20S		2.2	5×11	3.0	13	30	EKYA101E□□2R2ME11D	
	1,200	10×25	0.042	0.17	1,650	EKYA250E□□122MJ25S		3.3	5×11	2.7	11	40	EKYA101E□□3R3ME11D	
	1,500	12.5×20	0.035	0.12	1,900	EKYA250E□□152MK20S		4.7	5×11	2.5	10	65	EKYA101E□□4R7ME11D	
	2,200	12.5×25	0.027	0.089	2,230	EKYA250E□□222MK25S		6.8	5×11	1.4	5.6	125	EKYA101E□□6R8ME11D	

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

**KYA Series**
**◆STANDARD RATINGS**

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
			20°C	-10°C		
100	10	6.3×11	0.57	2.3	205	EKYA101E□□100MF11D
	15	6.3×11	0.57	2.3	205	EKYA101E□□150MF11D
	27	8×11.5	0.36	1.4	355	EKYA101E□□270MHB5D
	39	8×15	0.25	1.0	450	EKYA101E□□390MH15D
	47	10×12.5	0.17	0.66	480	EKYA101E□□470MJC5S
	56	8×20	0.19	0.76	565	EKYA101E□□560MH20D
	68	10×16	0.11	0.47	600	EKYA101E□□680MJ16S
	100	10×20	0.084	0.34	800	EKYA101E□□101MJ20S
	150	10×25	0.069	0.28	900	EKYA101E□□151MJ25S
	180	12.5×20	0.062	0.18	1,100	EKYA101E□□181MK20S
	220	12.5×25	0.047	0.14	1,250	EKYA101E□□221MK25S
	330	16×25	0.038	0.12	1,700	EKYA101E□□331ML25S
	470	16×31.5	0.032	0.095	1,850	EKYA101E□□471MLN3S
	560	16×35.5	0.029	0.086	2,000	EKYA101E□□561MLP1S

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

**◆RATED RIPPLE CURRENT MULTIPLIERS**

## ●Frequency Multipliers

Capacitance (μF)	Frequency (Hz)			
	120	1k	10k	100k
1.0 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°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.