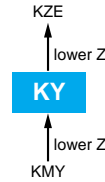


Upgrade!

KY Series

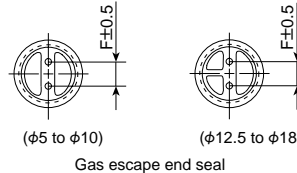
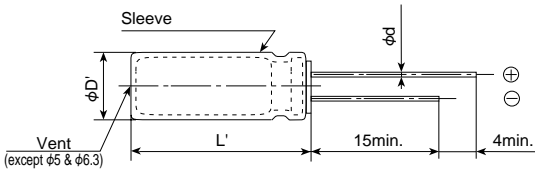
- Newly innovative electrolyte is employed to minimize ESR
- Endurance with ripple current : 4000 to 10000 hours at 105°C **Upgrade!**
- Non solvent-proof type



◆ SPECIFICATIONS

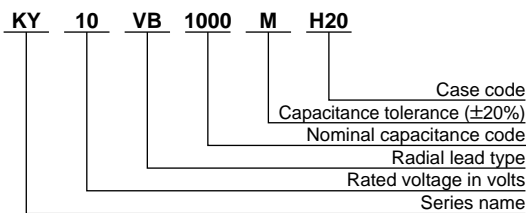
Items	Characteristics						
Category	-40 to +105°C						
Temperature Range	-40 to +105°C						
Rated Voltage Range	6.3 to 50V _{dc}						
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)						
Leakage Current	I=0.01CV or 3µA, whichever is greater. Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 2 minutes)						
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	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°C, 120Hz)						
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2
	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3
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 for the specified period of time at 105°C.						
	Time	6.3 to 10V _{dc}	φ5 & 6.3 : 4000hours	φ8 & 10 : 6000hours	φ12.5 to 18 : 8000hours		
		16 to 50V _{dc}	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°C after exposing them for 500 hours at 105°C 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



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

Upgrade!

KY Series
◆STANDARD RATINGS

Case size φDXL (mm)	V _{dc} Case code	6.3				10				16			
		Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5X11	E11	150	0.58	2.3	210	100	0.58	2.3	210	56	0.58	2.3	210
6.3X11	F11	330	0.22	0.87	340	220	0.22	0.87	340	120	0.22	0.87	340
8X11.5	H11	680	0.13	0.52	640	470	0.13	0.52	640	330	0.13	0.52	640
8X15	H15	1,000	0.087	0.35	840	680	0.087	0.35	840	470	0.087	0.35	840
8X20	H20	1,200	0.069	0.27	1,050	1,000	0.069	0.27	1,050	680	0.069	0.27	1,050
10X12.5	J12	820	0.080	0.32	865	680	0.080	0.32	865	470	0.080	0.32	865
10X16	J16	1,200	0.060	0.24	1,210	1,000	0.060	0.24	1,210	680	0.060	0.24	1,210
10X20	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
10X25	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
10X30	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
12.5X15	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
12.5X20	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
12.5X25	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
12.5X30	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
12.5X35	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
12.5X40	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
16X15	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
16X20	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
16X25	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
16X31.5	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
16X35.5	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
16X40	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
18X15	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
18X20	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
18X25	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
18X31.5	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
18X35.5	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
18X40	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 φDXL (mm)	V _{dc} Case code	25				35				50			
		Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)	Capacitance (μF)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C/100kHz)
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5X11	E11	47	0.58	2.3	210	33	0.58	2.3	210	22	0.70	2.8	180
6.3X11	F11	100	0.22	0.87	340	56	0.22	0.87	340	56	0.30	1.2	295
8X11.5	H11	220	0.13	0.52	640	150	0.13	0.52	640	100	0.17	0.68	555
8X15	H15	330	0.087	0.35	840	220	0.087	0.35	840	120	0.12	0.48	730
8X20	H20	470	0.069	0.27	1,050	270	0.069	0.27	1,050	180	0.091	0.36	910
10X12.5	J12	330	0.080	0.32	865	220	0.080	0.32	865	150	0.12	0.48	760
10X16	J16	470	0.060	0.24	1,210	330	0.060	0.24	1,210	220	0.084	0.34	1,050
10X20	J20	680	0.046	0.18	1,400	470	0.046	0.18	1,400	270	0.060	0.24	1,220
10X25	J25	820	0.042	0.17	1,650	560	0.042	0.17	1,650	330	0.055	0.22	1,440
10X30	J30	1,000	0.031	0.12	1,910	680	0.031	0.12	1,910	470	0.043	0.17	1,690
12.5X15	K15	680	0.049	0.16	1,450	470	0.049	0.16	1,450	270	0.061	0.20	1,260
12.5X20	K20	1,000	0.035	0.12	1,900	680	0.035	0.12	1,900	470	0.045	0.15	1,660
12.5X25	K25	1,500	0.027	0.089	2,230	1,000	0.027	0.089	2,230	560	0.034	0.11	1,950
12.5X30	K30	1,800	0.024	0.078	2,650	1,200	0.024	0.078	2,650	680	0.030	0.10	2,310
12.5X35	K35	2,200	0.020	0.065	2,880	1,500	0.020	0.065	2,880	820	0.025	0.083	2,510
12.5X40	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
16X15	L15	1,000	0.042	0.12	1,940	680	0.042	0.12	1,940	470	0.055	0.17	1,690
16X20	L20	1,800	0.027	0.078	2,530	1,200	0.027	0.078	2,530	820	0.034	0.10	2,210
16X25	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
16X31.5	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
16X35.5	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
16X40	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
18X15	M15	1,200	0.043	0.11	2,210	1,000	0.043	0.11	2,210	560	0.054	0.15	1,930
18X20	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
18X25	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
18X31.5	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
18X35.5	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
18X40	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