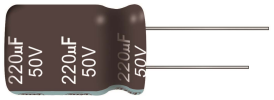
EY Series

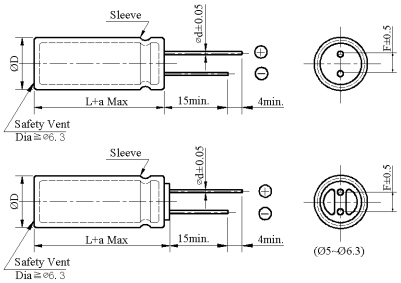


- **Miniaturized, Low E.S.R and Low impedance**
- **Suitable for use in high ripple current capability**
- **Load life 4,000~10,000 hours at 105℃**

◆ SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-55~ +105℃
Working Voltage Range	6.3 ~ 100Vdc
Capacitance Range	6.8 ~18,000μF
Capacitance Tolerance	±20% (at 25℃ and 120Hz)
Dissipation Factor (tanδ) (at 25℃, 120Hz)	Rated Voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 tanδ(Max): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 / 0.09 / 0.08 The above values should be increased by 0.02 for every additional 1000μF
Leakage Current	I=0.01CV or 3μA whichever is greater I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 2 minutes
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100 Z(-55℃)/Z(+20℃): 4 / 3 / 3 / 3 / 3 / 3 / 3 / 3 (at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 4,000~10,000 hours at 105°C Capacitance change: ≦ ±25% of the initial value Dissipation factor(tanδ): ≦200% of the specified value Leakage current: ≦ specified value Size: ≦ 6.3 Φ: 4,000 (6.3~10WV) / 5,000 (16~100WV); 8 ~ 10 Φ: 6,000 / 7,000; ≧12.5Φ: 8,000 / 10,000
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25℃ after exposing them for 1,000 hours at 105℃ without voltage applied. Capacitance change: ≦ ±25% of the initial value Dissipation factor(tanδ): ≦ 200% of the specified value Leakage current: ≦ 200% of the specified value
Others	Conforms to JIS-C-5101-4 (1998), characteristic W

◆ DIMENSIONS (mm)



ΦD	5	6.3	8	10	12.5 L< 35	12.5 L≧35	16	18
ΦD	ΦD + 0.5 Max							
Φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0		7.5	7.5
a	L + 1.5 Max				≦ 35 L+1.5Max ≧ 40 L+2.0 Max		L + 1.5 Max	

◆ PART NUMBER SYSTEM(Example : 10V 5600μF)

E	Y	1	A	5	6	2	M	N	N	1	8	2	0						

- Special Request
- Size code(1820 : 18×20)
- Lead length code
- Lead forming Type code
- Capacitance tolerance code(M:±20%)
- Capacitance code (5600μF)
- Voltage code (10V)
- Series code (EY)

EY Series

◆ **Case size & Permissible rated ripple current**

Nominal capacitance (uF)	6.3V				10V			
	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz)		Max. Rated ripple current @105℃ 100kHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz)		Max. Rated ripple current @105℃ 100kHz (mA rms)
		20℃	-10℃			20℃	-10℃	
100					5×11	0.580	2.300	215
150	5×11	0.570	2.300	210	5×11	0.580	2.300	230
220	6.3×11	0.250	0.900	320	6.3×11	0.220	0.870	340
330	6.3×11	0.210	0.870	340	6.3×11	0.220	0.870	380
470	8×11.5	0.150	0.580	345	8×11.5	0.130	0.520	640
680	8×11.5	0.130	0.520	645	8×15	0.086	0.350	845
					10×12.5	0.080	0.310	865
820	10×12.5	0.080	0.320	865	10×16	0.070	0.280	1015
1000	8×15	0.085	0.350	870	8×20	0.068	0.270	1050
					10×16	0.060	0.240	1215
1200	8×20	0.071	0.260	1050	10×20	0.045	0.180	1410
	10×16	0.062	0.240	1215				
1500	10×20	0.045	0.180	1410	10×25	0.041	0.170	1610
					12.5×16	0.049	0.160	1450
1800	12.5×16	0.048	0.160	1460	12.5×20	0.039	0.150	1710
2200	10×25	0.042	0.170	1650	10×30	0.030	0.120	1920
					12.5×20	0.035	0.120	1910
					16×16	0.042	0.120	1900
2700	10×30	0.030	0.120	1900	18×15	0.042	0.110	2220
	16×15	0.041	0.120	1945				
3300	12.5×20	0.034	0.120	1900	12.5×25	0.026	0.089	2230
3900	12.5×25	0.026	0.088	2240	12.5×30	0.023	0.078	2660
	18×15	0.042	0.110	2210	16×20	0.026	0.078	2540
4700	12.5×30	0.023	0.078	2650	12.5×35	0.020	0.065	2890
5600	12.5×35	0.020	0.065	2890	12.5×40	0.016	0.055	3360
	16×20	0.026	0.077	2540	16×25	0.020	0.060	2940
					18×20	0.025	0.066	2870
6800	12.5×40	0.016	0.055	3350	16×31.5	0.016	0.050	3460
	16×25	0.020	0.060	2940	18×25	0.018	0.049	3150
	18×20	0.025	0.066	2870				
8200	16×31.5	0.016	0.050	3450	16×35.5	0.015	0.044	3610
					18×31.5	0.015	0.040	4180
10000	16×35.5	0.014	0.044	3620	16×40	0.013	0.038	4090
	18×25	0.018	0.049	3150	18×35.5	0.012	0.038	4150
12000	16×40	0.012	0.038	4090	18×40	0.011	0.032	4290
	18×31.5	0.014	0.040	4180				
15000	18×35.5	0.013	0.038	4230				
18000	18×40	0.012	0.032	4290				

EY Series

◆ **Case size & Permissible rated ripple current**

Nominal capacitance (uF)	16V				25V			
	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)
10	5×11	1.100	3.020	96	5×11	1.100	3.020	100
22	5×11	0.750	2.800	120	5×11	0.700	2.800	140
47	5×11	0.600	2.600	180	5×11	0.570	2.300	205
56	5×11	0.570	2.300	220	5×11	0.570	2.300	240
100	5×11	0.350	0.760	260	6.3×11	0.210	0.870	340
	6.3×11	0.210	0.820	310				
120	6.3×11	0.210	0.870	340				
220	6.3×11	0.150	0.650	450	8×11.5	0.120	0.520	650
	8×11.5	0.190	0.850	650				
330	8×11.5	0.120	0.520	760	8×15	0.087	0.350	850
					10×12.5	0.081	0.320	870
470	8×15	0.086	0.350	840	8×20	0.070	0.270	1050
	10×12.5	0.080	0.320	865	10×16	0.060	0.240	1210
680	8×20	0.069	0.270	1060	10×20	0.045	0.180	1410
	10×16	0.060	0.240	1210	12.5×16	0.049	0.160	1460
820	10×20	0.052	0.220	1310	10×25	0.041	0.170	1660
1000	10×20	0.045	0.180	1410	10×30	0.030	0.120	1920
	12.5×16	0.050	0.160	1450	12.5×20	0.034	0.120	1910
					16×16	0.042	0.120	1940
1200	10×25	0.043	0.170	1650	18×15	0.043	0.110	2220
1500	10×30	0.030	0.120	1920	12.5×25	0.026	0.089	2240
	12.5×20	0.035	0.120	1910				
	16×16	0.042	0.120	1940				
1800	12.5×25	0.028	0.095	2140	12.5×30	0.024	0.078	2660
					16×20	0.026	0.078	2540
2200	12.5×25	0.026	0.089	2240	12.5×35	0.020	0.065	2890
	18×15	0.042	0.110	2220	18×20	0.025	0.066	2870
2700	12.5×30	0.023	0.077	2650	12.5×40	0.016	0.056	3360
	16×20	0.026	0.078	2540	16×25	0.021	0.060	2940
3300	12.5×35	0.020	0.066	2890	16×30	0.016	0.050	3460
					18×25	0.018	0.048	3150
3900	12.5×40	0.016	0.056	3350	16×35.5	0.014	0.043	3620
	16×25	0.021	0.060	2930	18×31.5	0.015	0.040	4180
	16×20	0.025	0.067	2860				
4700	16×31.5	0.016	0.050	3450	16×40	0.012	0.038	4090
	18×25	0.018	0.049	3150	18×35.5	0.013	0.038	4230
5600	16×35.5	0.015	0.044	3620	18×40	0.011	0.032	4290
	18×31.5	0.015	0.040	4180				
6800	16×40	0.012	0.038	4080				
8200	18×35.5	0.014	0.038	4230				
18000	18×40	0.011	0.032	4290				

EY Series

◆ **Case size & Permissible rated ripple current**

Nominal capacitance (uF)	35V				50V			
	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)
10					5×11	1.300	2.800	135
22					5×11	0.700	2.500	180
33	5×11	0.560	2.300	220	6.3×11	0.600	1.900	205
47	6.3×11	0.350	1.400	280	6.3×11	0.380	1.500	220
56	6.3×11	0.210	0.860	340	8×11.5	0.300	1.200	300
100	8×11.5	0.150	0.560	510	8×11.5	0.160	0.670	560
150	8×11.5	0.130	0.520	650	8×15	0.120	0.480	740
220	8×15	0.086	0.350	850	10×16	0.083	0.340	1050
330	10×16	0.060	0.240	1210	10×25	0.053	0.220	1450
470	10×20	0.045	0.180	1410	12.5×20	0.044	0.150	1670
560	10×25	0.041	0.160	1650	12.5×25	0.033	0.110	1950
680	10×30	0.030	0.120	1920	12.5×30	0.030	0.100	2320
820	12.5×25	0.029	0.095	2050	12.5×35	0.023	0.081	2520
1000	12.5×25	0.028	0.088	2230	16×25	0.025	0.075	2555
1200	12.5×30	0.023	0.078	2660	16×31.5	0.021	0.066	3020
1500	12.5×35	0.020	0.065	2880	18×35.5	0.018	0.056	3150
2200	16×31.5	0.016	0.056	3350	18×35.5	0.017	0.046	3690
2700	18×35.5	0.015	0.044	3620	18×40	0.014	0.038	3810
3300	16×40	0.013	0.038	4090				
3900	18×40	0.012	0.033	4290				

Nominal capacitance (uF)	63V				100V			
	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)	Case size ΦD×L (mm)	Impedance (Ωmax/100kHz) 20℃	Impedance (Ωmax/100kHz) -10℃	Max. Rated ripple current @105℃ 100kHz (mA rms)
6.8					5×11	2.200	9.200	56
15	5×11	2.200	9.200	56	6.3×11	1.200	5.000	120
33	6.3×11	1.200	5.000	120	8×15	0.580	3.200	160
47	8×11.5	0.680	3.100	190	10×12.5	0.430	1.800	290
68	8×11.5	0.600	2.900	245	10×16	0.300	1.500	350
100	10×16	0.350	1.800	320	10×25	0.200	0.840	535
120	10×16	0.300	1.500	355	10×30	0.150	0.710	665
180	10×20	0.200	0.940	470	12.5×25	0.120	0.450	790
220	10×25	0.200	0.840	535	12.5×30	0.100	0.420	905
330	12.5×25	0.120	0.450	790	12.5×40	0.070	0.300	1190
470	12.5×30	0.100	0.420	910	18×35.5	0.045	0.170	1790
560	12.5×35	0.082	0.350	1050	16×40	0.040	0.150	2030
680	12.5×40	0.070	0.300	1190	18×35.5	0.040	0.150	2100
820	16×31.5	0.053	0.200	1580	18×40	0.036	0.130	2340
1000	18×35.5	0.045	0.170	1790				
1200	16×40	0.040	0.150	2020				
1500	18×40	0.035	0.130	2340				

◆ **RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz) 120	1K	10K	100K
6.3 ~ 100	6.8 ~ 68	0.30	0.55	0.80	1.00
	82 ~ 220	0.40	0.60	0.85	1.00
	330 ~ 820	0.50	0.65	0.90	1.00
	1000 ~ 18000	0.60	0.70	0.95	1.00