

KY Series

- Newly innovative electrolyte is employed to minimize ESR
- Endurance with ripple current : 4,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

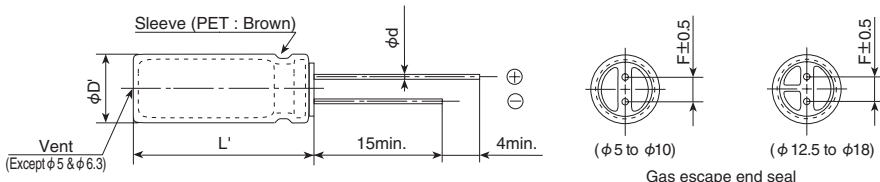


SPECIFICATIONS

Items	Characteristics										
Category	-40 to +105℃										
Temperature Range											
Rated Voltage Range	6.3 to 100V _{dc}										
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 (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℃, 120Hz)										
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	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℃.										
	Time	6.3 to 10V _{dc}	φ 5 & 6.3 : 4,000hours			φ 8 & 10 : 6,000hours			φ 12.5 to 18 : 8,000hours		
		16 to 100V _{dc}	φ 5 & 6.3 : 5,000hours			φ 8 & 10 : 7,000hours			φ 12.5 to 18 : 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℃ 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)"

◆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	150	5×11	0.58	2.3	210	EKY-6R3E□□151ME11D	16	1,500	12.5×20	0.035	0.12	1,900	EKY-160E□□152MK20S
	330	6.3×11	0.22	0.87	340	EKY-6R3E□□331MF11D		1,500	16×15	0.042	0.12	1,940	EKY-160E□□152ML15S
	680	8×11.5	0.13	0.52	640	EKY-6R3E□□681MHB5D		2,200	12.5×25	0.027	0.089	2,230	EKY-160E□□222MK25S
	820	10×12.5	0.080	0.32	865	EKY-6R3E□□821MJC5S		2,200	18×15	0.043	0.11	2,210	EKY-160E□□222MM15S
	1,000	8×15	0.087	0.35	840	EKY-6R3E□□102MH15D		2,700	12.5×30	0.024	0.078	2,650	EKY-160E□□272MK30S
	1,200	8×20	0.069	0.27	1,050	EKY-6R3E□□122MH20D		2,700	16×20	0.027	0.078	2,530	EKY-160E□□272ML20S
	1,200	10×16	0.060	0.24	1,210	EKY-6R3E□□122MJ16S		3,300	12.5×35	0.020	0.065	2,880	EKY-160E□□332MK35S
	1,500	10×20	0.046	0.18	1,400	EKY-6R3E□□152MJ20S		3,900	12.5×40	0.017	0.056	3,350	EKY-160E□□392MK40S
	1,800	12.5×15	0.049	0.16	1,450	EKY-6R3E□□182MK15S		3,900	16×25	0.021	0.060	2,930	EKY-160E□□392ML25S
	2,200	10×25	0.042	0.17	1,650	EKY-6R3E□□222MJ25S		3,900	18×20	0.026	0.067	2,860	EKY-160E□□392MM20S
	2,700	10×30	0.031	0.12	1,910	EKY-6R3E□□272MJ30S		4,700	16×31.5	0.017	0.050	3,450	EKY-160E□□472MLN3S
	2,700	16×15	0.042	0.12	1,940	EKY-6R3E□□272ML15S		4,700	18×25	0.019	0.049	3,140	EKY-160E□□472MM25S
	3,300	12.5×20	0.035	0.12	1,900	EKY-6R3E□□332MK20S		5,600	16×35.5	0.015	0.044	3,610	EKY-160E□□562MLP1S
	3,900	12.5×25	0.027	0.089	2,230	EKY-6R3E□□392MK25S		5,600	18×31.5	0.015	0.040	4,170	EKY-160E□□562MMN3S
	3,900	18×15	0.043	0.11	2,210	EKY-6R3E□□392MM15S		6,800	16×40	0.013	0.038	4,080	EKY-160E□□682ML40S
	4,700	12.5×30	0.024	0.078	2,650	EKY-6R3E□□472MK30S		8,200	18×35.5	0.014	0.038	4,220	EKY-160E□□822MMP1S
	5,600	12.5×35	0.020	0.065	2,880	EKY-6R3E□□562MK35S		10,000	18×40	0.012	0.032	4,280	EKY-160E□□103MM40S
	5,600	16×20	0.027	0.078	2,530	EKY-6R3E□□562ML20S	25	47	5×11	0.58	2.3	210	EKY-250E□□470ME11D
	6,800	12.5×40	0.017	0.056	3,350	EKY-6R3E□□682MK40S		100	6.3×11	0.22	0.87	340	EKY-250E□□101MF11D
	6,800	16×25	0.021	0.060	2,930	EKY-6R3E□□682ML25S		220	8×11.5	0.13	0.52	640	EKY-250E□□221MHB5D
	6,800	18×20	0.026	0.067	2,860	EKY-6R3E□□682MM20S		330	8×15	0.087	0.35	840	EKY-250E□□331MH15D
	8,200	16×31.5	0.017	0.050	3,450	EKY-6R3E□□822MLN3S		330	10×12.5	0.080	0.32	865	EKY-250E□□331MJC5S
	10,000	16×35.5	0.015	0.044	3,610	EKY-6R3E□□103MLP1S		470	8×20	0.069	0.27	1,050	EKY-250E□□471MH20D
	10,000	18×25	0.019	0.049	3,140	EKY-6R3E□□103MM25S		470	10×16	0.060	0.24	1,210	EKY-250E□□471MJ16S
	12,000	16×40	0.013	0.038	4,080	EKY-6R3E□□123ML40S		680	10×20	0.046	0.18	1,400	EKY-250E□□681MJ20S
	12,000	18×31.5	0.015	0.040	4,170	EKY-6R3E□□123MMN3S		680	12.5×15	0.049	0.16	1,450	EKY-250E□□681MK15S
	15,000	18×35.5	0.014	0.038	4,220	EKY-6R3E□□153MMP1S		820	10×25	0.042	0.17	1,650	EKY-250E□□821MJ25S
	18,000	18×40	0.012	0.032	4,280	EKY-6R3E□□183MM40S		1,000	10×30	0.031	0.12	1,910	EKY-250E□□102MJ30S
10	100	5×11	0.58	2.3	210	EKY-100E□□101ME11D		1,000	12.5×20	0.035	0.12	1,900	EKY-250E□□102MK20S
	220	6.3×11	0.22	0.87	340	EKY-100E□□221MF11D		1,000	16×15	0.042	0.12	1,940	EKY-250E□□102ML15S
	470	8×11.5	0.13	0.52	640	EKY-100E□□471MHB5D		1,200	18×15	0.043	0.11	2,210	EKY-250E□□122MM15S
	680	8×15	0.087	0.35	840	EKY-100E□□681MH15D		1,500	12.5×25	0.027	0.089	2,230	EKY-250E□□152MK25S
	680	10×12.5	0.080	0.32	865	EKY-100E□□681MJC5S		1,800	12.5×30	0.024	0.078	2,650	EKY-250E□□182MK30S
	1,000	8×20	0.069	0.27	1,050	EKY-100E□□102MH20D		1,800	16×20	0.027	0.078	2,530	EKY-250E□□182ML20S
	1,000	10×16	0.060	0.24	1,210	EKY-100E□□102MJ16S		2,200	12.5×35	0.020	0.065	2,880	EKY-250E□□222MK35S
	1,200	10×20	0.046	0.18	1,400	EKY-100E□□122MJ20S		2,200	18×20	0.026	0.067	2,860	EKY-250E□□222MM20S
	1,500	10×25	0.042	0.17	1,650	EKY-100E□□152MJ25S		2,700	12.5×40	0.017	0.056	3,350	EKY-250E□□272MK40S
	1,500	12.5×15	0.049	0.16	1,450	EKY-100E□□152MK15S		2,700	16×25	0.021	0.060	2,930	EKY-250E□□272ML25S
	2,200	10×30	0.031	0.12	1,910	EKY-100E□□222MJ30S		3,300	16×31.5	0.017	0.050	3,450	EKY-250E□□332MLN3S
	2,200	12.5×20	0.035	0.12	1,900	EKY-100E□□222MK20S		3,300	18×25	0.019	0.049	3,140	EKY-250E□□332MM25S
	2,200	16×15	0.042	0.12	1,940	EKY-100E□□222ML15S		3,900	16×35.5	0.015	0.044	3,610	EKY-250E□□392MLP1S
	2,700	18×15	0.043	0.11	2,210	EKY-100E□□272MM15S		3,900	18×31.5	0.015	0.040	4,170	EKY-250E□□392MMN3S
	3,300	12.5×25	0.027	0.089	2,230	EKY-100E□□332MK25S		4,700	16×40	0.013	0.038	4,080	EKY-250E□□472ML40S
	3,900	12.5×30	0.024	0.078	2,650	EKY-100E□□392MK30S		4,700	18×35.5	0.014	0.038	4,220	EKY-250E□□472MMP1S
	3,900	16×20	0.027	0.078	2,530	EKY-100E□□392ML20S		5,600	18×40	0.012	0.032	4,280	EKY-250E□□562MM40S
	4,700	12.5×35	0.020	0.065	2,880	EKY-100E□□472MK35S	35	33	5×11	0.58	2.3	210	EKY-350E□□330ME11D
	5,600	12.5×40	0.017	0.056	3,350	EKY-100E□□562MK40S		56	6.3×11	0.22	0.87	340	EKY-350E□□560MF11D
	5,600	16×25	0.021	0.060	2,930	EKY-100E□□562ML25S		150	8×11.5	0.13	0.52	640	EKY-350E□□151MHB5D
	5,600	18×20	0.026	0.067	2,860	EKY-100E□□562MM20S		220	8×15	0.087	0.35	840	EKY-350E□□221MH15D
	6,800	16×31.5	0.017	0.050	3,450	EKY-100E□□682MLN3S		220	10×12.5	0.080	0.32	865	EKY-350E□□221MJC5S
	6,800	18×25	0.019	0.049	3,140	EKY-100E□□682MM25S		270	8×20	0.069	0.27	1,050	EKY-350E□□271MH20D
	8,200	16×35.5	0.015	0.044	3,610	EKY-100E□□822MLP1S		330	10×16	0.060	0.24	1,210	EKY-350E□□331MJ16S
	8,200	18×31.5	0.015	0.040	4,170	EKY-100E□□822MMN3S		470	10×20	0.046	0.18	1,400	EKY-350E□□471MJ20S
	10,000	16×40	0.013	0.038	4,080	EKY-100E□□103ML40S		470	12.5×15	0.049	0.16	1,450	EKY-350E□□471MK15S
	10,000	18×35.5	0.014	0.038	4,220	EKY-100E□□103MMP1S		560	10×25	0.042	0.17	1,650	EKY-350E□□561MJ25S
	12,000	18×40	0.012	0.032	4,280	EKY-100E□□123MM40S		680	10×30	0.031	0.12	1,910	EKY-350E□□681MJ30S
16	56	5×11	0.58	2.3	210	EKY-160E□□560ME11D		680	12.5×20	0.035	0.12	1,900	EKY-350E□□681MK20S
	120	6.3×11	0.22	0.87	340	EKY-160E□□121MF11D		680	16×15	0.042	0.12	1,940	EKY-350E□□681ML15S
	330	8×11.5	0.13	0.52	640	EKY-160E□□331MHB5D		1,000	12.5×25	0.027	0.089	2,230	EKY-350E□□102MK25S
	470	8×15	0.087	0.35	840	EKY-160E□□471MH15D		1,000	18×15	0.043	0.11	2,210	EKY-350E□□102MM15S
	470	10×12.5	0.080	0.32	865	EKY-160E□□471MJC5S		1,200	12.5×30	0.024	0.078	2,650	EKY-350E□□122MK30S
	680	8×20	0.069	0.27	1,050	EKY-160E□□681MH20D		1,200	16×20	0.027	0.078	2,530	EKY-350E□□122ML20S
	680	10×16	0.060	0.24	1,210	EKY-160E□□681MJ16S		1,500	12.5×35	0.020	0.065	2,880	EKY-350E□□152MK35S
	1,000	10×20	0.046	0.18	1,400	EKY-160E□□102MJ20S		1,800	12.5×40	0.017	0.056	3,350	EKY-350E□□182MK40S
	1,000	12.5×15	0.049	0.16	1,450	EKY-160E□□102MK15S		1,800	16×25	0.021	0.060	2,930	EKY-350E□□182ML25S
	1,200	10×25	0.042	0.17	1,650	EKY-160E□□122MJ25S		1,800	18×20	0.026	0.067	2,860	EKY-350E□□182MM20S
	1,500	10×30	0.031	0.12	1,910	EKY-160E□□152MJ30S		2,200	16×31.5	0.017	0.050	3,450	EKY-350E□□222MLN3S

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

◆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.
			20°C	-10°C		
35	2,200	18×25	0.019	0.049	3,140	EKY-350E□□222MM25S
	2,700	16×35.5	0.015	0.044	3,610	EKY-350E□□272MLP1S
	2,700	18×31.5	0.015	0.040	4,170	EKY-350E□□272MMN3S
	3,300	16×40	0.013	0.038	4,080	EKY-350E□□332ML40S
	3,300	18×35.5	0.014	0.038	4,220	EKY-350E□□332MMP1S
	3,900	18×40	0.012	0.032	4,280	EKY-350E□□392MM40S
50	1.0	5×11	4.0	16.0	30	EKY-500E□□1R0ME11D
	2.2	5×11	2.5	10.0	43	EKY-500E□□2R2ME11D
	3.3	5×11	2.2	8.8	53	EKY-500E□□3R3ME11D
	4.7	5×11	1.9	7.6	88	EKY-500E□□4R7ME11D
	10	5×11	1.5	6.0	100	EKY-500E□□100ME11D
	22	5×11	0.70	2.8	180	EKY-500E□□220ME11D
	56	6.3×11	0.30	1.2	295	EKY-500E□□560MF11D
	100	8×11.5	0.17	0.68	555	EKY-500E□□101MHB5D
	120	8×15	0.12	0.48	730	EKY-500E□□121MH15D
	150	10×12.5	0.12	0.48	760	EKY-500E□□151MJC5S
	180	8×20	0.091	0.36	910	EKY-500E□□181MH20D
	220	10×16	0.084	0.34	1,050	EKY-500E□□221MJ16S
	270	10×20	0.060	0.24	1,220	EKY-500E□□271MJ20S
	270	12.5×15	0.061	0.20	1,260	EKY-500E□□271MK15S
	330	10×25	0.055	0.22	1,440	EKY-500E□□331MJ25S
	470	10×30	0.043	0.17	1,690	EKY-500E□□471MJ30S
	470	12.5×20	0.045	0.15	1,660	EKY-500E□□471MK20S
	470	16×15	0.055	0.17	1,690	EKY-500E□□471ML15S
	560	12.5×25	0.034	0.11	1,950	EKY-500E□□561MK25S
	560	18×15	0.054	0.15	1,930	EKY-500E□□561MM15S
	680	12.5×30	0.030	0.10	2,310	EKY-500E□□681MK30S
	820	12.5×35	0.025	0.083	2,510	EKY-500E□□821MK35S
	820	16×20	0.034	0.10	2,210	EKY-500E□□821ML20S
	1,000	12.5×40	0.021	0.069	2,920	EKY-500E□□102MK40S
	1,000	16×25	0.025	0.075	2,555	EKY-500E□□102ML25S
	1,000	18×20	0.036	0.097	2,490	EKY-500E□□102MM20S
63	1,200	16×31.5	0.022	0.066	3,010	EKY-500E□□122MLN3S
	1,200	18×25	0.026	0.070	2,740	EKY-500E□□122MM25S
	1,500	16×35.5	0.019	0.057	3,150	EKY-500E□□152MLP1S
	1,800	16×40	0.016	0.048	3,710	EKY-500E□□182ML40S
	1,800	18×31.5	0.021	0.057	3,635	EKY-500E□□182MMN3S
	2,200	18×35.5	0.017	0.046	3,680	EKY-500E□□222MMP1S
	2,700	18×40	0.014	0.038	3,800	EKY-500E□□272MM40S
	15	5×11	0.88	3.5	165	EKY-630E□□150ME11D
	33	6.3×11	0.35	1.4	265	EKY-630E□□330MF11D
	56	8×11.5	0.22	0.88	500	EKY-630E□□560MHB5D
	82	8×15	0.16	0.64	665	EKY-630E□□820MH15D
	82	10×12.5	0.11	0.44	690	EKY-630E□□820MJC5S
	120	8×20	0.12	0.48	820	EKY-630E□□121MH20D
	120	10×16	0.076	0.31	950	EKY-630E□□121MJ16S
	180	10×20	0.056	0.23	1,150	EKY-630E□□181MJ20S
	180	12.5×16	0.072	0.29	1,150	EKY-630E□□181MK16S
	220	10×25	0.046	0.19	1,350	EKY-630E□□221MJ25S
	270	12.5×20	0.041	0.13	1,500	EKY-630E□□271MK20S
	390	12.5×25	0.031	0.093	1,900	EKY-630E□□391MK25S
63	470	12.5×30	0.028	0.084	2,300	EKY-630E□□471MK30S
	470	16×20	0.032	0.096	2,000	EKY-630E□□471ML20S
	560	12.5×35	0.024	0.072	2,500	EKY-630E□□561MK35S
	680	12.5×40	0.021	0.063	2,800	EKY-630E□□681MK40S
63	680	16×25	0.025	0.075	2,600	EKY-630E□□681ML25S
	680	18×20	0.030	0.090	2,500	EKY-630E□□681MM20S
	820	16×31.5	0.021	0.063	2,850	EKY-630E□□821MLN3S
	820	18×25	0.024	0.072	2,800	EKY-630E□□821MM25S
	1,000	16×35.5	0.019	0.057	2,900	EKY-630E□□102MLP1S
	1,200	16×40	0.018	0.054	3,400	EKY-630E□□122ML40S
	1,200	18×31.5	0.020	0.060	3,300	EKY-630E□□122MMN3S
	1,500	18×35.5	0.018	0.054	3,400	EKY-630E□□152MMP1S
	1,800	18×40	0.017	0.051	3,500	EKY-630E□□182MM40S
	68	10×12.5	0.17	0.66	480	EKY-800E□□680MJC5S
	100	10×16	0.11	0.47	600	EKY-800E□□101MJ16S
	120	10×20	0.084	0.34	800	EKY-800E□□121MJ20S
	150	10×25	0.069	0.28	900	EKY-800E□□151MJ25S
	150	12.5×16	0.11	0.34	750	EKY-800E□□151MK16S
	220	12.5×20	0.062	0.18	1,100	EKY-800E□□221MK20S
	330	12.5×25	0.047	0.14	1,250	EKY-800E□□331MK25S
	330	16×20	0.048	0.15	1,350	EKY-800E□□331ML20S
	390	12.5×30	0.042	0.13	1,500	EKY-800E□□391MK30S
80	470	12.5×35	0.036	0.11	1,650	EKY-800E□□471MK35S
	470	16×25	0.038	0.12	1,700	EKY-800E□□471ML25S
	470	18×20	0.045	0.14	1,500	EKY-800E□□471MM20S
	560	12.5×40	0.032	0.095	1,800	EKY-800E□□561MK40S
	680	16×31.5	0.032	0.095	1,850	EKY-800E□□681MLN3S
	680	18×25	0.036	0.11	1,750	EKY-800E□□681MM25S
	820	16×35.5	0.029	0.086	2,000	EKY-800E□□821MLP1S
	820	18×31.5	0.030	0.090	1,900	EKY-800E□□821MMN3S
	1,000	16×40	0.027	0.081	2,200	EKY-800E□□102ML40S
	1,000	18×35.5	0.027	0.081	2,200	EKY-800E□□102MMP1S
	1,200	18×40	0.026	0.077	2,700	EKY-800E□□122MM40S
	6.8	5×11	1.4	5.6	125	EKY-101E□□6R8ME11D
	15	6.3×11	0.57	2.3	205	EKY-101E□□150MF11D
	27	8×11.5	0.36	1.4	355	EKY-101E□□270MHB5D
	39	8×15	0.25	1.0	450	EKY-101E□□390MH15D
	47	10×12.5	0.17	0.66	480	EKY-101E□□470MJC5S
	56	8×20	0.19	0.76	565	EKY-101E□□560MH20D
	68	10×16	0.11	0.47	600	EKY-101E□□680MJ16S
	82	10×20	0.084	0.34	800	EKY-101E□□820MJ20S
	100	12.5×16	0.11	0.34	750	EKY-101E□□101MK16S
100	120	10×25	0.069	0.28	900	EKY-101E□□121MJ25S
	150	12.5×20	0.062	0.18	1,100	EKY-101E□□151MK20S
	220	12.5×25	0.047	0.14	1,250	EKY-101E□□221MK25S
	220	16×20	0.048	0.15	1,350	EKY-101E□□221ML20S
	270	12.5×30	0.042	0.13	1,500	EKY-101E□□271MK30S
	330	12.5×35	0.036	0.11	1,650	EKY-101E□□331MK35S
	330	16×25	0.038	0.12	1,700	EKY-101E□□331ML25S
	330	18×20	0.045	0.14	1,500	EKY-101E□□331MM20S
	390	12.5×40	0.032	0.095	1,800	EKY-101E□□391MK40S
	470	16×31.5	0.032	0.095	1,850	EKY-101E□□471MLN3S
	470	18×25	0.036	0.11	1,750	EKY-101E□□471MM25S
	560	16×35.5	0.029	0.086	2,000	EKY-101E□□561MLP1S
	560	18×31.5	0.030	0.090	1,900	EKY-101E□□561MMN3S
	680	16×40	0.027	0.081	2,200	EKY-101E□□681ML40S
	680	18×35.5	0.027	0.081	2,200	EKY-101E□□681MMP1S
	820	18×40	0.026	0.077	2,700	EKY-101E□□821MM40S

□ □ : 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.