

Upgrade!

**KZE Series**

- Ultra Low impedance for Personal Computer and Storage Equipment
- Endurance with ripple current: 105°C 1000 to 5000 hours
- Non solvent-proof type
- Pb-free design

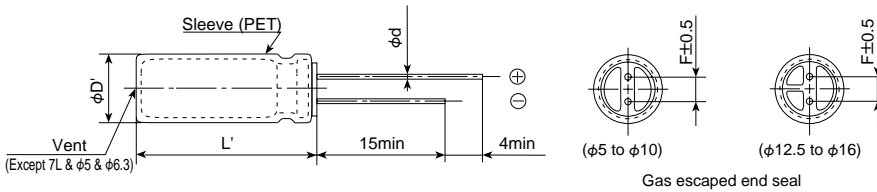


◆ SPECIFICATIONS

Items	Characteristics	
Category	-40 to +105°C	
Temperature Range	-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 (tanδ)	Rated voltage (V <sub>dc</sub> )	6.3V 10V 16V 25V 35V 50V 63V 80V 100V
	tanδ (Max.)	0.22 0.19 0.16 0.14 0.12 0.10 0.09 0.09 0.08
	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)	Z (-25°C) / Z (+20°C)	2max.
	Z (-40°C) / Z (+20°C)	3max. (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 for the specified period of time at 105°C.	
	Time	7L : 1000hours φ5 & φ6.3 : 2000hours φ8 : 3000hours φ10 : 4000hours φ12.5 & φ16 : 5000hours
	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

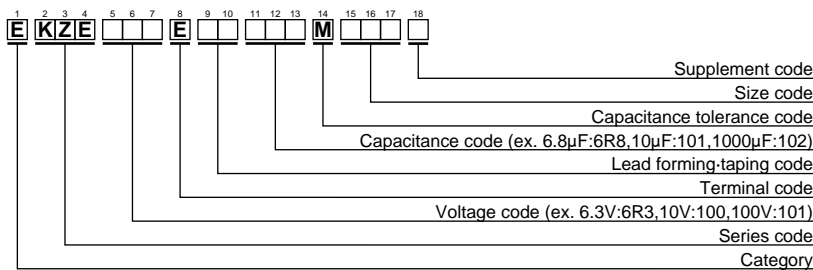
◆ DIMENSIONS [mm]

● Terminal Code : E



φD	5	6.3	8	10, 12.5	16, 18
φd	7L 11L~	0.45	0.45	0.45	—
F	0.5	0.5	0.6	0.6	0.8
φD'	φD+0.5max.				
L'	L+1.5max.(7L : L+1.0max.)				

◆ PART NUMBERING SYSTEM



Please refer to "A guide to global code (radial lead type)"

◆ 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.	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						20°C	-10°C			
6.3	68	5 × 7	0.43	1.3	210	EKZE6R3E□□680ME07D	25	820	10 × 25	0.022	0.066	2150	EKZE250E□□821MJ25S	
	150	6.3 × 7	0.23	0.69	300	EKZE6R3E□□151MF07D		1000	12.5 × 20	0.021	0.053	2360	EKZE250E□□102MK20S	
	150	5 × 11	0.30	1.0	250	EKZE6R3E□□151ME11D		1500	12.5 × 25	0.018	0.045	2770	EKZE250E□□152MK25S	
	220	8 × 7	0.15	0.45	380	EKZE6R3E□□221MH07D		1800	12.5 × 30	0.016	0.041	3290	EKZE250E□□182MK30S	
	330	6.3 × 11	0.13	0.41	405	EKZE6R3E□□331MF11D		1800	16 × 20	0.018	0.045	3140	EKZE250E□□182ML20S	
	560	8 × 11.5	0.072	0.22	760	EKZE6R3E□□561MHB5D		2200	12.5 × 35	0.015	0.039	3400	EKZE250E□□222MK35S	
	820	8 × 15	0.056	0.17	995	EKZE6R3E□□821MH15D		2700	16 × 25	0.016	0.043	3460	EKZE250E□□272ML25S	
	1000	10 × 12.5	0.053	0.16	1030	EKZE6R3E□□102MJC5S		35	18	5 × 7	0.47	1.5	210	EKZE350E□□180ME07D
	1200	8 × 20	0.041	0.13	1250	EKZE6R3E□□122MH20D			33	5 × 11	0.30	1.0	250	EKZE350E□□330ME11D
	1200	10 × 16	0.038	0.12	1430	EKZE6R3E□□122MJ16S			39	6.3 × 7	0.25	0.75	300	EKZE350E□□390MF07D
	1500	10 × 20	0.023	0.069	1820	EKZE6R3E□□152MJ20S			56	8 × 7	0.16	0.48	380	EKZE350E□□560MH07D
	2200	10 × 25	0.022	0.066	2150	EKZE6R3E□□222MJ25S			56	6.3 × 11	0.13	0.41	405	EKZE350E□□560MF11D
	3300	12.5 × 20	0.021	0.053	2360	EKZE6R3E□□332MK20S			150	8 × 11.5	0.072	0.22	760	EKZE350E□□151MHB5D
	3900	12.5 × 25	0.018	0.045	2770	EKZE6R3E□□392MK25S			220	8 × 15	0.056	0.17	995	EKZE350E□□221MH15D
	4700	12.5 × 30	0.016	0.041	3290	EKZE6R3E□□472MK30S			220	10 × 12.5	0.053	0.16	1030	EKZE350E□□221MJC5S
	5600	12.5 × 35	0.015	0.039	3400	EKZE6R3E□□562MK35S			270	8 × 20	0.041	0.13	1250	EKZE350E□□271MH20D
	5600	16 × 20	0.018	0.045	3140	EKZE6R3E□□562ML20S			330	10 × 16	0.038	0.12	1430	EKZE350E□□331MJ16S
	6800	16 × 25	0.016	0.043	3460	EKZE6R3E□□682ML25S			470	10 × 20	0.023	0.069	1820	EKZE350E□□471MJ20S
10	56	5 × 7	0.44	1.4	210	EKZE100E□□560ME07D	560		10 × 25	0.022	0.066	2150	EKZE350E□□561MJ25S	
	100	5 × 11	0.30	1.0	250	EKZE100E□□101ME11D	680		12.5 × 20	0.021	0.053	2360	EKZE350E□□681MK20S	
	120	6.3 × 7	0.23	0.69	300	EKZE100E□□121MF07D	1000		12.5 × 25	0.018	0.045	2770	EKZE350E□□102MK25S	
	180	8 × 7	0.15	0.45	380	EKZE100E□□181MH07D	1200		12.5 × 30	0.016	0.041	3290	EKZE350E□□122MK30S	
	220	6.3 × 11	0.13	0.41	405	EKZE100E□□221MF11D	1200		16 × 20	0.018	0.045	3140	EKZE350E□□122ML20S	
	470	8 × 11.5	0.072	0.22	760	EKZE100E□□471MHB5D	1500		12.5 × 35	0.015	0.039	3400	EKZE350E□□152MK35S	
	680	8 × 15	0.056	0.17	995	EKZE100E□□681MH15D	1800		16 × 25	0.016	0.043	3460	EKZE350E□□182ML25S	
	680	10 × 12.5	0.053	0.16	1030	EKZE100E□□681MJC5S	50	10	5 × 7	0.50	1.5	210	EKZE500E□□100ME07D	
	1000	8 × 20	0.041	0.13	1250	EKZE100E□□102MH20D		22	6.3 × 7	0.26	0.78	300	EKZE500E□□220MF07D	
	1000	10 × 16	0.038	0.12	1430	EKZE100E□□102MJ16S		22	5 × 11	0.34	1.18	238	EKZE500E□□220ME11D	
	1200	10 × 20	0.023	0.069	1820	EKZE100E□□122MJ20S		33	8 × 7	0.17	0.51	380	EKZE500E□□330MH07D	
	1500	10 × 25	0.022	0.066	2150	EKZE100E□□152MJ25S		56	6.3 × 11	0.14	0.50	385	EKZE500E□□560MF11D	
	2200	12.5 × 20	0.021	0.053	2360	EKZE100E□□222MK20S		100	8 × 11.5	0.074	0.22	724	EKZE500E□□101MHB5D	
	3300	12.5 × 25	0.018	0.045	2770	EKZE100E□□332MK25S		120	8 × 15	0.061	0.18	950	EKZE500E□□121MH15D	
	3900	12.5 × 30	0.016	0.041	3290	EKZE100E□□392MK30S		150	10 × 12.5	0.061	0.18	979	EKZE500E□□151MJC5S	
	3900	16 × 20	0.018	0.045	3140	EKZE100E□□392ML20S		180	8 × 20	0.046	0.14	1190	EKZE500E□□181MH20D	
	4700	12.5 × 35	0.015	0.039	3400	EKZE100E□□472MK35S		220	10 × 16	0.042	0.12	1370	EKZE500E□□221MJ16S	
	5600	16 × 25	0.016	0.043	3460	EKZE100E□□562ML25S		270	10 × 20	0.030	0.090	1580	EKZE500E□□271MJ20S	
16	33	5 × 7	0.45	1.4	210	EKZE160E□□330ME07D		330	10 × 25	0.028	0.085	1870	EKZE500E□□331MJ25S	
	56	5 × 11	0.30	1.0	250	EKZE160E□□560ME11D		470	12.5 × 20	0.027	0.068	2050	EKZE500E□□471MK20S	
	68	6.3 × 7	0.24	0.72	300	EKZE160E□□680MF07D		560	12.5 × 25	0.023	0.059	2410	EKZE500E□□561MK25S	
	120	8 × 7	0.15	0.45	380	EKZE160E□□121MH07D		680	12.5 × 30	0.021	0.052	2860	EKZE500E□□681MK30S	
	120	6.3 × 11	0.13	0.41	405	EKZE160E□□121MF11D		820	12.5 × 35	0.019	0.051	2960	EKZE500E□□821MK35S	
	330	8 × 11.5	0.072	0.22	760	EKZE160E□□331MHB5D		820	16 × 20	0.023	0.059	2730	EKZE500E□□821ML20S	
	470	8 × 15	0.056	0.17	995	EKZE160E□□471MH15D		1000	16 × 25	0.021	0.056	3010	EKZE500E□□102ML25S	
	470	10 × 12.5	0.053	0.16	1030	EKZE160E□□471MJC5S	63	15	5 × 11	0.88	3.5	165	EKZE630E□□150ME11D	
	680	8 × 20	0.041	0.13	1250	EKZE160E□□681MH20D		33	6.3 × 11	0.35	1.4	265	EKZE630E□□330MF11D	
	680	10 × 16	0.038	0.12	1430	EKZE160E□□681MJ16S		56	8 × 11.5	0.22	0.88	500	EKZE630E□□560MHB5D	
	1000	10 × 20	0.023	0.069	1820	EKZE160E□□102MJ20S		82	8 × 15	0.16	0.64	665	EKZE630E□□820MH15D	
	1200	10 × 25	0.022	0.066	2150	EKZE160E□□122MJ25S		82	10 × 12.5	0.11	0.44	690	EKZE630E□□820MJC5S	
	1500	12.5 × 20	0.021	0.053	2360	EKZE160E□□152MK20S		120	8 × 20	0.12	0.48	820	EKZE630E□□121MH20D	
	2200	12.5 × 25	0.018	0.045	2770	EKZE160E□□222MK25S		120	10 × 16	0.076	0.31	950	EKZE630E□□121MJ16S	
	2700	12.5 × 30	0.016	0.041	3290	EKZE160E□□272MK30S		180	10 × 20	0.056	0.23	1150	EKZE630E□□181MJ20S	
	2700	16 × 20	0.018	0.045	3140	EKZE160E□□272ML20S		180	12.5 × 16	0.072	0.29	1150	EKZE630E□□181MK16S	
	3300	12.5 × 35	0.015	0.039	3400	EKZE160E□□332MK35S		220	10 × 25	0.046	0.19	1350	EKZE630E□□221MJ25S	
	3900	16 × 25	0.016	0.043	3460	EKZE160E□□392ML25S		270	12.5 × 20	0.041	0.13	1500	EKZE630E□□271MK20S	
25	27	5 × 7	0.46	1.4	210	EKZE250E□□270ME07D		390	12.5 × 25	0.031	0.093	1900	EKZE630E□□391MK25S	
	47	5 × 11	0.30	1.0	250	EKZE250E□□470ME11D		470	12.5 × 30	0.028	0.084	2300	EKZE630E□□471MK30S	
	56	6.3 × 7	0.24	0.72	300	EKZE250E□□560MF07D		470	16 × 20	0.032	0.096	2000	EKZE630E□□471ML20S	
	100	8 × 7	0.15	0.45	380	EKZE250E□□101MH07D		560	12.5 × 35	0.024	0.072	2500	EKZE630E□□561MK35S	
	100	6.3 × 11	0.13	0.41	405	EKZE250E□□101MF11D		680	12.5 × 40	0.021	0.063	2800	EKZE630E□□681MK40S	
	220	8 × 11.5	0.072	0.22	760	EKZE250E□□221MHB5D		680	16 × 25	0.025	0.075	2600	EKZE630E□□681ML25S	
	330	8 × 15	0.056	0.17	995	EKZE250E□□331MH15D		680	18 × 20	0.030	0.090	2500	EKZE630E□□681MM20S	
	330	10 × 12.5	0.053	0.16	1030	EKZE250E□□331MJC5S	820	16 × 31.5	0.021	0.063	2850	EKZE630E□□821MLN3S		
	470	8 × 20	0.041	0.13	1250	EKZE250E□□471MH20D	820	18 × 25	0.024	0.072	2800	EKZE630E□□821MM25S		
	470	10 × 16	0.038	0.12	1430	EKZE250E□□471MJ16S	1000	16 × 35.5	0.019	0.057	2900	EKZE630E□□102MLP1S		
	680	10 × 20	0.023	0.069	1820	EKZE250E□□681MJ20S	1200	16 × 40	0.018	0.054	3400	EKZE630E□□122ML40S		

□ : Lead forming / Taping code

Upgrade!

KZE 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.	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						20°C	-10°C		
63	1200	18 × 31.5	0.020	0.060	3300	EKZE630E□□122MMN3S	100	6R8	5 × 11	1.4	5.6	125	EKZE101E□□6R8ME11D
	1500	18 × 35.5	0.018	0.054	3400	EKZE630E□□152MMP1S		15	6.3 × 11	0.57	2.3	205	EKZE101E□□150MF11D
	1800	18 × 40	0.017	0.051	3500	EKZE630E□□182MM40S		27	8 × 11.5	0.36	1.4	355	EKZE101E□□270MHB5D
80	68	10 × 12.5	0.17	0.66	480	EKZE800E□□680MJC5S		39	8 × 15	0.25	1.0	450	EKZE101E□□390MH15D
	100	10 × 16	0.11	0.47	600	EKZE800E□□101MJ16S		47	10 × 12.5	0.17	0.66	480	EKZE101E□□470MJC5S
	120	10 × 20	0.084	0.34	800	EKZE800E□□121MJ20S		56	8 × 20	0.19	0.76	565	EKZE101E□□560MH20D
	150	10 × 25	0.069	0.28	900	EKZE800E□□151MJ25S		68	10 × 16	0.11	0.47	600	EKZE101E□□680MJ16S
	150	12.5 × 16	0.11	0.34	750	EKZE800E□□151MK16S		82	10 × 20	0.084	0.34	800	EKZE101E□□820MJ20S
	220	12.5 × 20	0.062	0.18	1100	EKZE800E□□221MK20S		100	12.5 × 16	0.11	0.34	750	EKZE101E□□101MK16S
	330	12.5 × 25	0.047	0.14	1250	EKZE800E□□331MK25S		120	10 × 25	0.069	0.28	900	EKZE101E□□121MJ25S
	330	16 × 20	0.048	0.15	1350	EKZE800E□□331ML20S		150	12.5 × 20	0.062	0.18	1100	EKZE101E□□151MK20S
	390	12.5 × 30	0.042	0.13	1500	EKZE800E□□391MK30S		220	12.5 × 25	0.047	0.14	1250	EKZE101E□□221MK25S
	470	12.5 × 35	0.036	0.11	1650	EKZE800E□□471MK35S		220	16 × 20	0.048	0.15	1350	EKZE101E□□221ML20S
	470	16 × 25	0.038	0.12	1700	EKZE800E□□471ML25S		270	12.5 × 30	0.042	0.13	1500	EKZE101E□□271MK30S
	470	18 × 20	0.045	0.14	1500	EKZE800E□□471MM20S		330	12.5 × 35	0.036	0.11	1650	EKZE101E□□331MK35S
	560	12.5 × 40	0.032	0.095	1800	EKZE800E□□561MK40S		330	16 × 25	0.038	0.12	1700	EKZE101E□□331ML25S
	680	16 × 31.5	0.032	0.095	1850	EKZE800E□□681MLN3S		330	18 × 20	0.045	0.14	1500	EKZE101E□□331MM20S
	680	18 × 25	0.036	0.11	1750	EKZE800E□□681MM25S		390	12.5 × 40	0.032	0.095	1800	EKZE101E□□391MK40S
	820	16 × 35.5	0.029	0.086	2000	EKZE800E□□821MLP1S		470	16 × 31.5	0.032	0.095	1850	EKZE101E□□471MLN3S
	820	18 × 31.5	0.030	0.090	1900	EKZE800E□□821MMN3S		470	18 × 25	0.036	0.11	1750	EKZE101E□□471MM25S
	1000	16 × 40	0.027	0.081	2200	EKZE800E□□102ML40S		560	16 × 35.5	0.029	0.086	2000	EKZE101E□□561MLP1S
	1000	18 × 35.5	0.027	0.081	2200	EKZE800E□□102MMP1S		560	18 × 31.5	0.030	0.090	1900	EKZE101E□□561MMN3S
	1200	18 × 40	0.026	0.077	2700	EKZE800E□□122MM40S		680	16 × 40	0.027	0.081	2200	EKZE101E□□681ML40S
								680	18 × 35.5	0.027	0.081	2200	EKZE101E□□681MMP1S
								820	18 × 40	0.026	0.077	2700	EKZE101E□□821MM40S

□□ : Lead forming / Taping code

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

7L

Capacitance(μF)	Frequency (Hz)			
	120	1k	10k	100k
10 to 33	0.42	0.70	0.90	1.00
39 to 220	0.50	0.73	0.92	1.00

11L to 40L

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