

KZN Series

- Adoption of innovative high stability electrolyte
- High ripple current and long endurance
- Rated voltage range : 16 to 50Vdc, Capacitance range : 100 to 3,900μF
- Endurance with ripple current : 9,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS Compliant

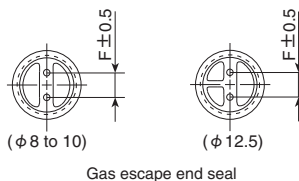
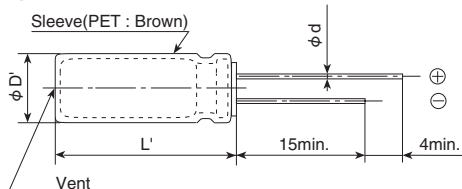


◆SPECIFICATIONS

Items	Characteristics				
Category	-40 to +105°C				
Temperature Range	-40 to +105°C				
Rated Voltage Range	16 to 50V _{dc}				
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)				
Leakage Current	I=0.01CV 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})	16V	25V	35V	50V
	tanδ (Max.)	0.16	0.14	0.12	0.10
	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	Z(-25°C)/Z(+20°C)	2 max.			
	Z(-40°C)/Z(+20°C)	3 max. (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 10,000 hours (9,000 hours for 12.5L max.) at 105°C.				
	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. 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. (tanδ)	≤200% of the initial specified value			
	Leakage current	≤The initial specified value			

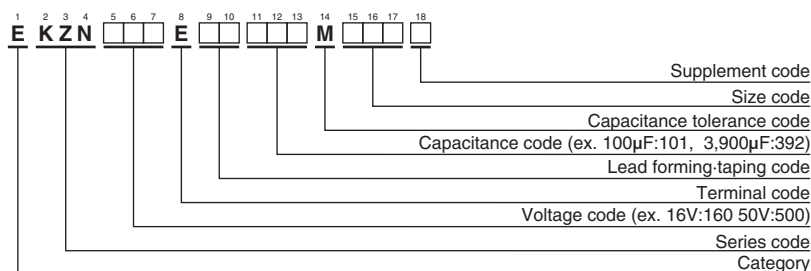
◆DIMENSIONS [mm]

- Terminal Code : E



φ D	8	10	12.5
φ d	0.6	0.6	0.6
F	3.5	5.0	5.0
D'	φ D + 0.5max.		
L'	L + 1.5max.		

◆PART NUMBERING SYSTEM



◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Capacitance (μF)	Frequency (Hz)			
	120	1k	10k	100k
150 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

Note : 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.

Specifications in this bulletin are subject to change without notice.

◆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				
			16	470						8×11.5	0.075			0.23	1,200
680	8×15	0.059		0.18	1,600	EKZN160E□□681MH15D	220	8×15	0.059	0.18	1,600	EKZN350E□□221MH15D			
680	10×12.5	0.053		0.16	1,700	EKZN160E□□681MJC5S	270	10×12.5	0.053	0.16	1,700	EKZN350E□□271MJC5S			
820	8×20	0.041		0.13	1,960	EKZN160E□□821MH20D	330	8×20	0.041	0.13	1,960	EKZN350E□□331MH20D			
1,000	10×16	0.038		0.12	2,000	EKZN160E□□102MJ16S	390	10×16	0.038	0.12	2,000	EKZN350E□□391MJ16S			
1,500	10×20	0.028		0.084	2,500	EKZN160E□□152MJ20S	470	10×20	0.028	0.084	2,500	EKZN350E□□471MJ20S			
1,500	12.5×16	0.035		0.11	2,400	EKZN160E□□152MK16S	560	12.5×16	0.035	0.11	2,400	EKZN350E□□561MK16S			
1,800	10×25	0.026		0.074	2,900	EKZN160E□□182MJ25S	680	10×25	0.026	0.074	2,900	EKZN350E□□681MJ25S			
2,200	12.5×20	0.025		0.075	2,600	EKZN160E□□222MK20S	820	12.5×20	0.025	0.075	2,600	EKZN350E□□821MK20S			
2,700	12.5×25	0.019		0.057	3,200	EKZN160E□□272MK25S	1,200	12.5×25	0.019	0.057	3,200	EKZN350E□□122MK25S			
3,300	12.5×30	0.018		0.054	3,660	EKZN160E□□332MK30S	1,500	12.5×30	0.018	0.054	3,660	EKZN350E□□152MK30S			
3,900	12.5×35	0.016		0.048	4,120	EKZN160E□□392MK35S	1,800	12.5×35	0.016	0.048	4,120	EKZN350E□□182MK35S			
25	270	8×11.5		0.075	0.23	1,200	EKZN250E□□271MHB5D	50	100	8×11.5	0.075	0.23	1,200	EKZN500E□□101MHB5D	
	390	8×15		0.059	0.18	1,600	EKZN250E□□391MH15D		120	8×15	0.059	0.18	1,600	EKZN500E□□121MH15D	
	470	10×12.5	0.053	0.16	1,700	EKZN250E□□471MJC5S	150		10×12.5	0.073	0.22	1,280	EKZN500E□□151MJC5S		
	560	8×20	0.041	0.13	1,960	EKZN250E□□561MH20D	180		8×20	0.041	0.13	1,960	EKZN500E□□181MH20D		
	680	10×16	0.038	0.12	2,000	EKZN250E□□681MJ16S	220		10×16	0.053	0.16	1,650	EKZN500E□□221MJ16S		
	820	10×20	0.028	0.084	2,500	EKZN250E□□821MJ20S	330		10×20	0.038	0.12	2,060	EKZN500E□□331MJ20S		
	820	12.5×16	0.035	0.11	2,400	EKZN250E□□821MK16S	330		12.5×16	0.045	0.14	2,160	EKZN500E□□331MK16S		
	1,200	10×25	0.026	0.074	2,900	EKZN250E□□122MJ25S	390		10×25	0.032	0.10	2,420	EKZN500E□□391MJ25S		
	1,500	12.5×20	0.025	0.075	2,600	EKZN250E□□152MK20S	470		12.5×20	0.025	0.10	2,300	EKZN500E□□471MK20S		
	1,800	12.5×25	0.019	0.057	3,200	EKZN250E□□182MK25S	680		12.5×25	0.023	0.080	2,800	EKZN500E□□681MK25S		
	2,200	12.5×30	0.018	0.054	3,660	EKZN250E□□222MK30S	820		12.5×30	0.026	0.074	3,370	EKZN500E□□821MK30S		
	2,700	12.5×35	0.016	0.048	4,120	EKZN250E□□272MK35S	1,000		12.5×35	0.021	0.067	3,810	EKZN500E□□102MK35S		

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