

KZR Series

- Adoption of innovative high stability electrolyte
- High ripple current and long endurance
- Rated voltage range : 10 to 35Vdc, Capacitance range : 220 to 2,200μF
- Endurance with ripple current : 4,000 to 5,000 hours at 105°C
- Non solvent resistant type
- RoHS Compliant

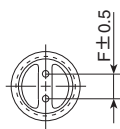
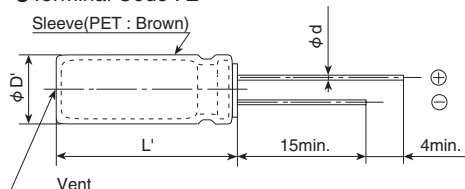


◆SPECIFICATIONS

Items	Characteristics				
Category	-40 to +105°C				
Temperature Range	-40 to +105°C				
Rated Voltage Range	10 to 35V _{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})	10V	16V	25V	35V
	tanδ (Max.)	0.19	0.16	0.14	0.12
	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 the specified period of time at 105°C.				
	Time	φ8 : 4,000hours φ10 : 5,000hours			
	Capacitance change	≤ ±25% of the initial value (10V _{dc} : ≤ ±30%)			
	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 (10V _{dc} : ≤ ±30%)			
	D.F. (tanδ)	≤200% of the initial specified value			
	Leakage current	≤The initial specified value			

◆DIMENSIONS [mm]

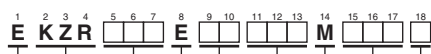
- Terminal Code : E



Gas escape end seal

φD	8	10
φd	0.6	0.6
F	3.5	5.0
φD'	φD+0.5max.	
L'	L+1.5max.	

◆PART NUMBERING SYSTEM



Supplement code
 Size code
 Capacitance tolerance code
 Capacitance code (ex. 220μF:221, 1,000μF:102)
 Lead forming-taping code
 Terminal code
 Voltage code (ex. 10V:100 35V:350)
 Series code
 Category

◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

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

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◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Impedance (Ωmax/100kHz)		Rated ripple current (mA rms/105°C, 100kHz)	Part No.
				20°C	-10°C		
10	1,000	8×15	0.19	0.059	0.18	2,050	EKZR100E□□102MH15D
	1,000	10×12.5	0.19	0.053	0.16	2,190	EKZR100E□□102MJC5S
	1,200	8×20	0.19	0.041	0.13	2,380	EKZR100E□□122MH20D
	1,500	10×16	0.19	0.038	0.12	2,550	EKZR100E□□152MJ16S
	1,800	10×20	0.19	0.028	0.084	2,880	EKZR100E□□182MJ20S
	2,200	10×25	0.21	0.024	0.072	3,160	EKZR100E□□222MJ25S
16	560	8×15	0.16	0.059	0.18	2,050	EKZR160E□□561MH15D
	680	10×12.5	0.16	0.053	0.16	2,190	EKZR160E□□681MJC5S
	820	8×20	0.16	0.041	0.13	2,380	EKZR160E□□821MH20D
	1,000	10×16	0.16	0.038	0.12	2,550	EKZR160E□□102MJ16S
	1,500	10×20	0.16	0.028	0.084	2,880	EKZR160E□□152MJ20S
	1,800	10×25	0.16	0.024	0.072	3,160	EKZR160E□□182MJ25S
25	390	8×15	0.14	0.059	0.18	2,050	EKZR250E□□391MH15D
	470	10×12.5	0.14	0.053	0.16	2,190	EKZR250E□□471MJC5S
	470	8×20	0.14	0.041	0.13	2,380	EKZR250E□□471MH20D
	680	10×16	0.14	0.038	0.12	2,550	EKZR250E□□681MJ16S
	820	10×20	0.14	0.028	0.084	2,880	EKZR250E□□821MJ20S
	1,000	10×25	0.14	0.024	0.072	3,160	EKZR250E□□102MJ25S
35	220	8×15	0.12	0.059	0.18	2,050	EKZR350E□□221MH15D
	270	10×12.5	0.12	0.053	0.16	2,190	EKZR350E□□271MJC5S
	330	8×20	0.12	0.041	0.13	2,380	EKZR350E□□331MH20D
	470	10×16	0.12	0.038	0.12	2,550	EKZR350E□□471MJ16S
	560	10×20	0.12	0.028	0.084	2,880	EKZR350E□□561MJ20S
	680	10×25	0.12	0.024	0.072	3,160	EKZR350E□□681MJ25S

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