



## KZE Series

- Newly innovative electrolyte is employed to minimize impedance
- Endurance with ripple current: 2,000 to 5,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

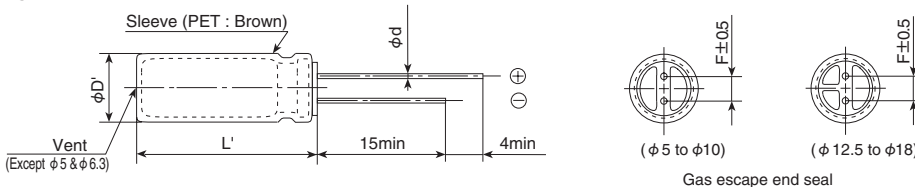


### SPECIFICATIONS

Items	Characteristics									
<b>Category</b>	-40 to +105°C									
<b>Temperature Range</b>	-40 to +105°C									
<b>Rated Voltage Range</b>	6.3 to 100V <sub>dc</sub>									
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)									
<b>Leakage Current</b>	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)									
<b>Dissipation Factor (tan δ)</b>	Rated voltage (V <sub>dc</sub> )	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°C, 120Hz)									
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Z (-25°C) / Z (+20°C)	2max.								
	Z (-40°C) / Z (+20°C)	3max.								
<b>Endurance</b>	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	φ 5 & φ 6.3 : 2,000hours	φ 8 : 3,000hours	φ 10 : 4,000hours	φ 12.5 to φ 18 : 5,000hours					
	Capacitance change	≤ ±25% of the initial value								
	D.F. (tan δ)	≤ 200% of the initial specified value								
	Leakage current	≤ The initial specified value								
<b>Shelf Life</b>	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. (tan δ)	≤ 200% of the initial specified value								
	Leakage current	≤ The initial specified value								

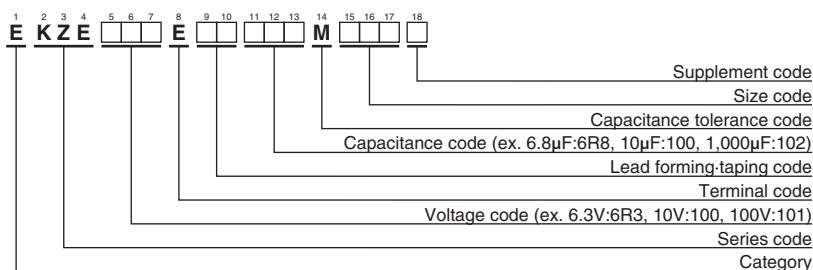
### DIMENSIONS [mm]

● Terminal Code : E



φD	5	6.3	8	10, 12.5	16, 18
φd	0.5	0.5	0.6	0.6	0.8
F	2.0	2.5	3.5	5.0	7.5
φD'	φ D+0.5max.				
L'	L+1.5max.				

### PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"



STANDARD RATINGS

Table with columns: WV (Vdc), Cap (µF), Case size (φD×L(mm)), Impedance (Ω max./100kHz) at 20°C and -10°C, Rated ripple current (mA rms/105°C, 100kHz), Part No. The table is organized into four main sections based on WV voltage: 6.3V, 10V, 16V, and 25V. Each section contains multiple rows for different capacitance values and case sizes, with corresponding impedance and ripple current ratings.

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

Production of the products shown in [ ] is scheduled to be discontinued.

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.



## KZE Series

### ◆ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA <sub>rms</sub> / 105°C, 100kHz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA <sub>rms</sub> / 105°C, 100kHz)	Part No.
			20°C	-10°C						20°C	-10°C		
80	820	16×35.5	0.029	0.086	2,000	EKZE800E□□821MLP1S	100	150	12.5×20	0.062	0.18	1,100	EKZE101E□□151MK20S
	820	18×31.5	0.030	0.090	1,900	EKZE800E□□821MMN3S		220	12.5×25	0.047	0.14	1,250	EKZE101E□□221MK25S
	1,000	16×40	0.027	0.081	2,200	EKZE800E□□102ML40S		220	16×20	0.048	0.15	1,350	EKZE101E□□221ML20S
	1,000	18×35.5	0.027	0.081	2,200	EKZE800E□□102MMP1S		270	12.5×30	0.042	0.13	1,500	EKZE101E□□271MK30S
	1,200	18×40	0.026	0.077	2,700	EKZE800E□□122MM40S		330	12.5×35	0.036	0.11	1,650	EKZE101E□□331MK35S
100	6.8	5×11	1.4	5.6	125	EKZE101E□□6R8ME11D		330	16×25	0.038	0.12	1,700	EKZE101E□□331ML25S
	15	6.3×11	0.57	2.3	205	EKZE101E□□150MF11D		330	18×20	0.045	0.14	1,500	EKZE101E□□331MM20S
	27	8×11.5	0.36	1.4	355	EKZE101E□□270MHB5D		390	12.5×40	0.032	0.095	1,800	EKZE101E□□391MK40S
	39	8×15	0.25	1.0	450	EKZE101E□□390MH15D		470	16×31.5	0.032	0.095	1,850	EKZE101E□□471MLN3S
	47	10×12.5	0.17	0.66	480	EKZE101E□□470MJC5S		470	18×25	0.036	0.11	1,750	EKZE101E□□471MM25S
	56	8×20	0.19	0.76	565	EKZE101E□□560MH20D		560	16×35.5	0.029	0.086	2,000	EKZE101E□□561MLP1S
	68	10×16	0.11	0.47	600	EKZE101E□□680MJ16S		560	18×31.5	0.030	0.090	1,900	EKZE101E□□561MMN3S
	82	10×20	0.084	0.34	800	EKZE101E□□820MJ20S		680	16×40	0.027	0.081	2,200	EKZE101E□□681ML40S
	100	12.5×16	0.11	0.34	750	EKZE101E□□101MK16S		680	18×35.5	0.027	0.081	2,200	EKZE101E□□681MMP1S
	120	10×25	0.069	0.28	900	EKZE101E□□121MJ25S		820	18×40	0.026	0.077	2,700	EKZE101E□□821MM40S

□□ : Enter the appropriate lead forming or taping code.  
 Production of the products shown in   is scheduled to be discontinued.

### ◆ RATED RIPPLE CURRENT MULTIPLIERS

#### ⊙ Frequency Multipliers

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

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.  
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.  
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.  
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

[Available Items by Manufacturing Locations](#)

[Environmental Measures](#)

[Technical Note](#)

[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

[Taping, Lead-preforming and Packaging](#)

[Available Terminals for Snap-in and Screw Mount Type](#)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Chemi-Con:

[EKZE100ELL101ME11D](#) [EKZE101ELL121MJ25S](#) [EKZE101ELL151MK20S](#) [EKZE101ELL221MK25S](#)  
[EKZE101ELL331MM20S](#) [EKZE100ELL681MJC5S](#) [EKZE160ELL102MJ20S](#) [EKZE160ELL681MJ16S](#)  
[EKZE250ETD331MJC5S](#) [EKZE350ELL331MJ16S](#) [EKZE350ELL471MJ20S](#) [EKZE350ELL681MK20S](#)  
[EKZE500EC3102ML25S](#) [EKZE500ELL271MJ20S](#) [EKZE350ELL151MHB5D](#) [EKZE500ELL102ML25S](#)  
[EKZE350ETD221MJC5S](#) [EKZE630ELL121MJ16S](#) [EKZE630ETD121MJ16S](#) [EKZE6R3ETC122MH20D](#)  
[EKZE6R3ELL122MH20D](#) [EKZE6R3ELL331MF11D](#) [EKZE800ELL471MM20S](#) [EKZE101ELL470MJC5S](#)  
[EKZE250ETD471MJ16S](#) [EKZE630ELL391MK25S](#) [EKZE800ELL221MK20S](#) [EKZE800ELL331ML20S](#)  
[EKZE160ETD122MJ25S](#) [EKZE100ELL102MH20D](#) [EKZE100ELL392ML20S](#) [EKZE250ETD821MJ25S](#)  
[EKZE101ELL331MK35S](#) [EKZE100ELL152MJ25S](#) [EKZE101ELL681MMP1S](#) [EKZE101ELL680MJ16S](#)  
[EKZE100ETC101ME11D](#) [EKZE100ELL122MJ20S](#) [EKZE160ELL121MF11D](#) [EKZE100ELL221MF11D](#)  
[EKZE100ELL222MK20S](#) [EKZE100ELL332MK25S](#) [EKZE101ELL270MHB5D](#) [EKZE6R3ELL122MJ16S](#)  
[EKZE630ELL471MK30S](#) [EKZE101ELL390MH15D](#) [EKZE100ETD221MF11D](#) [EKZE101ELL101MK16S](#)  
[EKZE101ELL821MM40S](#) [EKZE101ELL221ML20S](#) [EKZE100ELL471MHB5D](#) [EKZE101ELL271MK30S](#)  
[EKZE100ELL681MH15D](#) [EKZE101ELL471MLN3N](#) [EKZE101ELL471MM25S](#) [EKZE101ELL561MLP1S](#)  
[EKZE101ELL561MMN3S](#) [EKZE160ELL332MK35S](#) [EKZE100ELL392MK30S](#) [EKZE250ELL331MJC5S](#)  
[EKZE160ELL680MF07D](#) [EKZE160ELL122MJ25S](#) [EKZE160ELL152MK20S](#) [EKZE160ELL222MK25S](#)  
[EKZE160ELL272MK30S](#) [EKZE250ETD152MK25S](#) [EKZE160ELL331MHB5D](#) [EKZE250ETC470ME11D](#)  
[EKZE160ELL392ML25S](#) [EKZE160ELL471MH15D](#) [EKZE250ELL101MF11D](#) [EKZE160ELL560ME11D](#)  
[EKZE160ETD681MH20D](#) [EKZE160ELL681MH20D](#) [EKZE160ETC331MHB5D](#) [EKZE160ETC681MH20D](#)  
[EKZE160ELL272ML20S](#) [EKZE250ELL222MK35S](#) [EKZE100ELL472MK35S](#) [EKZE100ELL562ML25S](#)  
[EKZE100ELL102MJ16S](#) [EKZE250ELL471MH20D](#) [EKZE250ELL101MH07D](#) [EKZE250ELL102MK20S](#)  
[EKZE250ELL152MK25S](#) [EKZE250ELL182MK30S](#) [EKZE250ETD331MH15D](#) [EKZE250ELL221MHB5D](#)  
[EKZE250ELL272ML25S](#) [EKZE250ELL331MH15D](#) [EKZE101ETD560MH20S](#) [EKZE250ELL470ME11D](#)  
[EKZE160ETD272MK30S](#) [EKZE250ELL471MJ16S](#) [EKZE250ELL560MF07D](#) [EKZE250ELL681MJ20S](#)  
[EKZE250ELL821MJ25S](#) [EKZE250ELL182ML20S](#) [EKZE350ELL221MJC5S](#) [EKZE250ETE102MK20S](#)