



KZE Series

- Newly innovative electrolyte is employed to minimize impedance
- Endurance with ripple current: 4,000/5,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

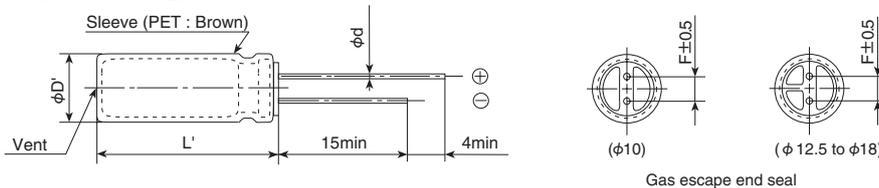


SPECIFICATIONS

Items	Characteristics									
Category	-40 to +105°C									
Temperature Range	-40 to +105°C									
Rated Voltage Range	6.3 to 100V _{dc}									
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 (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°C, 120Hz)									
Low Temperature Characteristics (Max. Impedance Ratio)	Z (-25°C) / Z (+20°C)	2max.								
	Z (-40°C) / Z (+20°C)	3max.								
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	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								
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. (tan δ)	≤ 200% of the initial specified value								
	Leakage current	≤ The initial specified value								

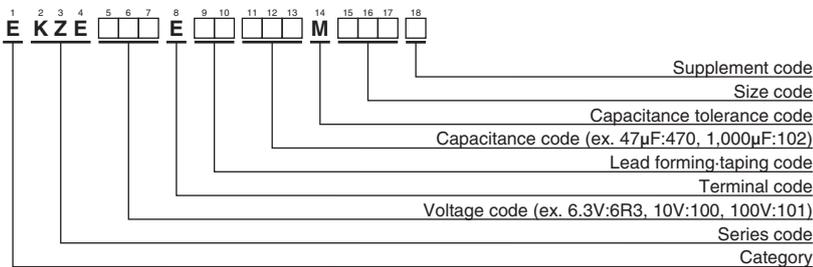
DIMENSIONS [mm]

- Terminal Code : E



φD	10, 12.5	16, 18
φd	0.6	0.8
F	5.0	7.5
φD'	φD+0.5max.	
L'	L+1.5max.	

PART NUMBERING SYSTEM



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

RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Capacitance(μF)	Frequency(Hz)			
	120	1k	10k	100k
47 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.



◆STANDARD RATINGS

WV (V _{ac})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA _{rms} /105°C, 100kHz)	Part No.	WV (V _{ac})	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	1,000	10×12.5	0.053	0.16	1,030	EKZE6R3E□□102MJC5S	63	82	10×12.5	0.11	0.44	690	EKZE630E□□820MJC5S
	1,200	10×16	0.038	0.12	1,430	EKZE6R3E□□122MJ16S		120	10×16	0.076	0.31	950	EKZE630E□□121MJ16S
	1,500	10×20	0.023	0.069	1,820	EKZE6R3E□□152MJ20S		180	10×20	0.056	0.23	1,150	EKZE630E□□181MJ20S
	2,200	10×25	0.022	0.066	2,150	EKZE6R3E□□222MJ25S		180	12.5×16	0.072	0.29	1,150	EKZE630E□□181MK16S
	3,300	12.5×20	0.021	0.053	2,360	EKZE6R3E□□332MK20S		220	10×25	0.046	0.19	1,350	EKZE630E□□221MJ25S
	3,900	12.5×25	0.018	0.045	2,770	EKZE6R3E□□392MK25S		270	12.5×20	0.041	0.13	1,500	EKZE630E□□271MK20S
	4,700	12.5×30	0.016	0.041	3,290	EKZE6R3E□□472MK30S		390	12.5×25	0.031	0.093	1,900	EKZE630E□□391MK25S
	5,600	12.5×35	0.015	0.039	3,400	EKZE6R3E□□562MK35S		470	12.5×30	0.028	0.084	2,300	EKZE630E□□471MK30S
	5,600	16×20	0.018	0.045	3,140	EKZE6R3E□□562ML20S		470	16×20	0.032	0.096	2,000	EKZE630E□□471ML20S
	6,800	16×25	0.016	0.043	3,460	EKZE6R3E□□682ML25S		560	12.5×35	0.024	0.072	2,500	EKZE630E□□561MK35S
10	680	10×12.5	0.053	0.16	1,030	EKZE100E□□681MJC5S	680	12.5×40	0.021	0.063	2,800	EKZE630E□□681MK40S	
	1,000	10×16	0.038	0.12	1,430	EKZE100E□□102MJ16S	680	16×25	0.025	0.075	2,600	EKZE630E□□681ML25S	
	1,200	10×20	0.023	0.069	1,820	EKZE100E□□122MJ20S	680	18×20	0.030	0.090	2,500	EKZE630E□□681MM20S	
	1,500	10×25	0.022	0.066	2,150	EKZE100E□□152MJ25S	820	16×31.5	0.021	0.063	2,850	EKZE630E□□821MLN3S	
	2,200	12.5×20	0.021	0.053	2,360	EKZE100E□□222MK20S	820	18×25	0.024	0.072	2,800	EKZE630E□□821MM25S	
	3,300	12.5×25	0.018	0.045	2,770	EKZE100E□□332MK25S	1,000	16×35.5	0.019	0.057	2,900	EKZE630E□□102MLP1S	
	3,900	12.5×30	0.016	0.041	3,290	EKZE100E□□392MK30S	1,200	16×40	0.018	0.054	3,400	EKZE630E□□122ML40S	
	3,900	16×20	0.018	0.045	3,140	EKZE100E□□392ML20S	1,200	18×31.5	0.020	0.060	3,300	EKZE630E□□122MMN3S	
	4,700	12.5×35	0.015	0.039	3,400	EKZE100E□□472MK35S	1,500	18×35.5	0.018	0.054	3,400	EKZE630E□□152MMP1S	
	5,600	16×25	0.016	0.043	3,460	EKZE100E□□562ML25S	1,800	18×40	0.017	0.051	3,500	EKZE630E□□182MM40S	
16	470	10×12.5	0.053	0.16	1,030	EKZE160E□□471MJC5S	68	10×12.5	0.17	0.66	480	EKZE800E□□680MJC5S	
	680	10×16	0.038	0.12	1,430	EKZE160E□□681MJ16S	100	10×16	0.11	0.47	600	EKZE800E□□101MJ16S	
	1,000	10×20	0.023	0.069	1,820	EKZE160E□□102MJ20S	120	10×20	0.084	0.34	800	EKZE800E□□121MJ20S	
	1,200	10×25	0.022	0.066	2,150	EKZE160E□□122MJ25S	150	10×25	0.069	0.28	900	EKZE800E□□151MJ25S	
	1,500	12.5×20	0.021	0.053	2,360	EKZE160E□□152MK20S	150	12.5×16	0.11	0.34	750	EKZE800E□□151MK16S	
	2,200	12.5×25	0.018	0.045	2,770	EKZE160E□□222MK25S	220	12.5×20	0.062	0.18	1,100	EKZE800E□□221MK20S	
	2,700	12.5×30	0.016	0.041	3,290	EKZE160E□□272MK30S	330	12.5×25	0.047	0.14	1,250	EKZE800E□□331MK25S	
	2,700	16×20	0.018	0.045	3,140	EKZE160E□□272ML20S	330	16×20	0.048	0.15	1,350	EKZE800E□□331ML20S	
	3,300	12.5×35	0.015	0.039	3,400	EKZE160E□□332MK35S	390	12.5×30	0.042	0.13	1,500	EKZE800E□□391MK30S	
	3,900	16×25	0.016	0.043	3,460	EKZE160E□□392ML25S	470	12.5×35	0.036	0.11	1,650	EKZE800E□□471MK35S	
25	330	10×12.5	0.053	0.16	1,030	EKZE250E□□331MJC5S	470	16×25	0.038	0.12	1,700	EKZE800E□□471ML25S	
	470	10×16	0.038	0.12	1,430	EKZE250E□□471MJ16S	560	12.5×40	0.032	0.095	1,800	EKZE800E□□561MK40S	
	680	10×20	0.023	0.069	1,820	EKZE250E□□681MJ20S	680	16×31.5	0.032	0.095	1,850	EKZE800E□□681MLN3S	
	820	10×25	0.022	0.066	2,150	EKZE250E□□821MJ25S	680	18×25	0.036	0.11	1,750	EKZE800E□□681MM25S	
	1,000	12.5×20	0.021	0.053	2,360	EKZE250E□□102MK20S	820	16×35.5	0.029	0.086	2,000	EKZE800E□□821MLP1S	
	1,500	12.5×25	0.018	0.045	2,770	EKZE250E□□152MK25S	820	18×31.5	0.030	0.090	1,900	EKZE800E□□821MMN3S	
	1,800	12.5×30	0.016	0.041	3,290	EKZE250E□□182MK30S	1,000	16×40	0.027	0.081	2,200	EKZE800E□□102ML40S	
	1,800	16×20	0.018	0.045	3,140	EKZE250E□□182ML20S	1,000	18×35.5	0.027	0.081	2,200	EKZE800E□□102MMP1S	
	2,200	12.5×35	0.015	0.039	3,400	EKZE250E□□222MK35S	1,200	18×40	0.026	0.077	2,700	EKZE800E□□122MM40S	
	2,700	16×25	0.016	0.043	3,460	EKZE250E□□272ML25S							
35	220	10×12.5	0.053	0.16	1,030	EKZE350E□□221MJC5S	47	10×12.5	0.17	0.66	480	EKZE101E□□470MJC5S	
	330	10×16	0.038	0.12	1,430	EKZE350E□□331MJ16S	68	10×16	0.11	0.47	600	EKZE101E□□680MJ16S	
	470	10×20	0.023	0.069	1,820	EKZE350E□□471MJ20S	82	10×20	0.084	0.34	800	EKZE101E□□820MJ20S	
	560	10×25	0.022	0.066	2,150	EKZE350E□□561MJ25S	100	12.5×16	0.11	0.34	750	EKZE101E□□101MK16S	
	680	12.5×20	0.021	0.053	2,360	EKZE350E□□681MK20S	120	10×25	0.069	0.28	900	EKZE101E□□121MJ25S	
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50	150	10×12.5	0.061	0.18	979	EKZE500E□□151MJC5S	330	16×25	0.038	0.12	1,700	EKZE101E□□331ML25S	
	220	10×16	0.042	0.12	1,370	EKZE500E□□221MJ16S	330	18×20	0.045	0.14	1,500	EKZE101E□□331MM20S	
	270	10×20	0.030	0.090	1,580	EKZE500E□□271MJ20S	390	12.5×40	0.032	0.095	1,800	EKZE101E□□391MK40S	
	330	10×25	0.028	0.085	1,870	EKZE500E□□331MJ25S	470	16×31.5	0.032	0.095	1,850	EKZE101E□□471MLN3S	
	470	12.5×20	0.027	0.068	2,050	EKZE500E□□471MK20S	470	18×25	0.036	0.11	1,750	EKZE101E□□471MM25S	
	560	12.5×25	0.023	0.059	2,410	EKZE500E□□561MK25S	560	16×35.5	0.029	0.086	2,000	EKZE101E□□561MLP1S	
	680	12.5×30	0.021	0.052	2,860	EKZE500E□□681MK30S	560	18×31.5	0.030	0.090	1,900	EKZE101E□□681MMN3S	
	820	12.5×35	0.019	0.051	2,960	EKZE500E□□821MK35S	680	16×40	0.027	0.081	2,200	EKZE101E□□681ML40S	
	820	16×20	0.023	0.059	2,730	EKZE500E□□821ML20S	680	18×35.5	0.027	0.081	2,200	EKZE101E□□681MMP1S	
	1,000	16×25	0.021	0.056	3,010	EKZE500E□□102ML25S	820	18×40	0.026	0.077	2,700	EKZE101E□□821MM40S	

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



- 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.
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- 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](#)