

KHE New!
Series

- Downsized from KMZ series
- Endurance with ripple current : 2,000 hours at 105°C
- Rated voltage range : 400 to 450V_{dc}, Capacitance range : 200 to 1,300μF
- Non solvent resistant type
- RoHS2 Compliant

KHE

↓
Downsized
↑
KMZ



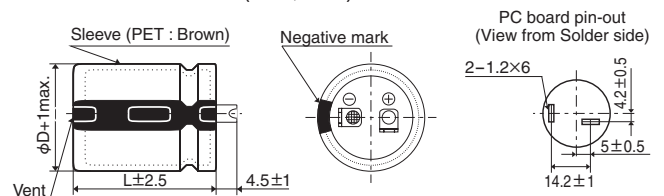
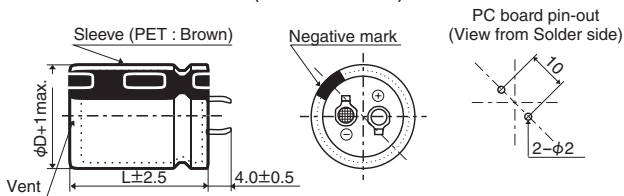
◆ SPECIFICATIONS

Items	Characteristics	
Category	-40 to +105°C	
Temperature Range		
Rated Voltage Range	400 to 450V _{dc}	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I ≤ 3.√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)	
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	400 to 450V
	tan δ (Max.)	0.20 (at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	400 to 450V
	Z(-25°C)/Z(+20°C)	8 (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 2,000 hours at 105°C.	
	Capacitance change	≤ ±20% 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 1,000 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	≤ ±15% of the initial value
	D.F. (tan δ)	≤ 150% of the initial specified value
	Leakage current	≤ The initial specified value

◆ DIMENSIONS [mm]

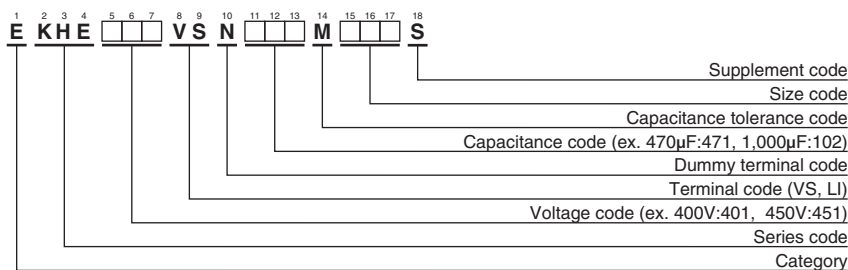
● Terminal Code : VS (φ25.4 to φ35) : Standard

● Terminal Code : LI (φ30, φ35)



The standard design has no plastic disc.

◆ PART NUMBERING SYSTEM



Please refer to "Product code guide (snap-in type)"

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	
400	220	25.4 × 25	0.20	1.13	EKHE401VSN221MQ25S	420	620	30 × 40	0.20	2.06	EKHE421VSN621MR40S	
	300	25.4 × 30	0.20	1.35	EKHE401VSN301MQ30S		680	25.4 × 60	0.20	2.35	EKHE421VSN681MQ60S	
	330	30 × 25	0.20	1.41	EKHE401VSN331MR25S		680	30 × 45	0.20	2.21	EKHE421VSN681MR45S	
	360	25.4 × 35	0.20	1.54	EKHE401VSN361MQ35S		680	35 × 35	0.20	1.95	EKHE421VSN681MA35S	
	430	25.4 × 40	0.20	1.72	EKHE401VSN431MQ40S		820	30 × 50	0.20	2.47	EKHE421VSN821MR50S	
	430	30 × 30	0.20	1.63	EKHE401VSN431MR30S		820	35 × 40	0.20	2.22	EKHE421VSN821MA40S	
	430	35 × 25	0.20	1.51	EKHE401VSN431MA25S		910	30 × 55	0.20	2.65	EKHE421VSN911MR55S	
	510	25.4 × 45	0.20	1.91	EKHE401VSN511MQ45S		910	35 × 45	0.20	2.40	EKHE421VSN911MA45S	
	510	30 × 35	0.20	1.82	EKHE401VSN511MR35S		1,000	30 × 60	0.20	2.83	EKHE421VSN102MR60S	
	560	25.4 × 50	0.20	2.03	EKHE401VSN561MQ50S		1,100	35 × 50	0.20	2.69	EKHE421VSN112MA50S	
	560	35 × 30	0.20	1.75	EKHE401VSN561MA30S		1,200	35 × 55	0.20	2.86	EKHE421VSN122MA55S	
	620	25.4 × 55	0.20	2.20	EKHE401VSN621MQ55S		1,300	35 × 60	0.20	3.03	EKHE421VSN132MA60S	
	620	30 × 40	0.20	2.06	EKHE401VSN621MR40S		450	200	25.4 × 25	0.20	1.07	EKHE451VSN201MQ25S
	680	25.4 × 60	0.20	2.35	EKHE401VSN681MQ60S			240	25.4 × 30	0.20	1.21	EKHE451VSN241MQ30S
	680	30 × 45	0.20	2.21	EKHE401VSN681MR45S			270	30 × 25	0.20	1.28	EKHE451VSN271MR25S
	680	35 × 35	0.20	1.95	EKHE401VSN681MA35S			330	25.4 × 35	0.20	1.48	EKHE451VSN331MQ35S
	820	30 × 50	0.20	2.47	EKHE401VSN821MR50S			390	25.4 × 40	0.20	1.64	EKHE451VSN391MQ40S
	820	35 × 40	0.20	2.22	EKHE401VSN821MA40S			390	30 × 30	0.20	1.55	EKHE451VSN391MR30S
	910	30 × 55	0.20	2.65	EKHE401VSN911MR55S			390	35 × 25	0.20	1.43	EKHE451VSN391MA25S
	1,000	30 × 60	0.20	2.83	EKHE401VSN102MR60S			430	25.4 × 45	0.20	1.75	EKHE451VSN431MQ45S
1,000	35 × 45	0.20	2.51	EKHE401VSN102MA45S	470	25.4 × 50		0.20	1.86	EKHE451VSN471MQ50S		
1,100	35 × 50	0.20	2.69	EKHE401VSN112MA50S	470	30 × 35		0.20	1.74	EKHE451VSN471MR35S		
1,200	35 × 55	0.20	2.86	EKHE401VSN122MA55S	510	35 × 30		0.20	1.67	EKHE451VSN511MA30S		
1,300	35 × 60	0.20	3.03	EKHE401VSN132MA60S	560	25.4 × 55		0.20	2.09	EKHE451VSN561MQ55S		
420	220	25.4 × 25	0.20	1.13	EKHE421VSN221MQ25S	560		30 × 40	0.20	1.96	EKHE451VSN561MR40S	
	270	25.4 × 30	0.20	1.28	EKHE421VSN271MQ30S	620		25.4 × 60	0.20	2.25	EKHE451VSN621MQ60S	
	330	30 × 25	0.20	1.41	EKHE421VSN331MR25S	620		30 × 45	0.20	2.11	EKHE451VSN621MR45S	
	360	25.4 × 35	0.20	1.54	EKHE421VSN361MQ35S	620		35 × 35	0.20	1.86	EKHE451VSN621MA35S	
	390	25.4 × 40	0.20	1.64	EKHE421VSN391MQ40S	680		30 × 50	0.20	2.25	EKHE451VSN681MR50S	
	390	30 × 30	0.20	1.55	EKHE421VSN391MR30S	750		35 × 40	0.20	2.13	EKHE451VSN751MA40S	
	430	35 × 25	0.20	1.51	EKHE421VSN431MA25S	820		30 × 55	0.20	2.52	EKHE451VSN821MR55S	
	470	25.4 × 45	0.20	1.83	EKHE421VSN471MQ45S	820		35 × 45	0.20	2.27	EKHE451VSN821MA45S	
	510	30 × 35	0.20	1.82	EKHE421VSN511MR35S	910	30 × 60	0.20	2.70	EKHE451VSN911MR60S		
	560	25.4 × 50	0.20	2.03	EKHE421VSN561MQ50S	1,000	35 × 50	0.20	2.56	EKHE451VSN102MA50S		
	560	35 × 30	0.20	1.75	EKHE421VSN561MA30S	1,100	35 × 55	0.20	2.74	EKHE451VSN112MA55S		
	620	25.4 × 55	0.20	2.20	EKHE421VSN621MQ55S	1,200	35 × 60	0.20	2.92	EKHE451VSN122MA60S		

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
Multipliers	0.77	1.00	1.10	1.21	1.32	1.33

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.