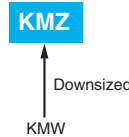


# KMZ Upgrade! Series

- The lower temperature range of the category temperature range has been expanded.
- Downsized from KMW series
- Endurance with ripple current : 2,000 hours at 105°C
- Rated voltage range : 420 & 450V<sub>dc</sub>, Capacitance range : 120 to 820μF
- Non solvent resistant type
- RoHS2 Compliant

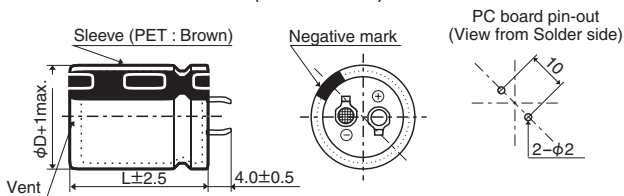


## ◆ SPECIFICATIONS

Items	Characteristics	
<b>Category Temperature Range</b>	-40 to +105°C	
<b>Rated Voltage Range</b>	420 & 450V <sub>dc</sub>	
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)	
<b>Leakage Current</b>	I ≤ 3/CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)	
<b>Dissipation Factor (tan δ)</b>	Rated voltage (V <sub>dc</sub> )	420 & 450V
	tan δ (Max.)	0.20 (at 20°C, 120Hz)
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Rated voltage (V <sub>dc</sub> )	420 & 450V
	Z(-25°C)/Z(+20°C)	8 (at 120Hz)
<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 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
<b>Shelf Life</b>	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

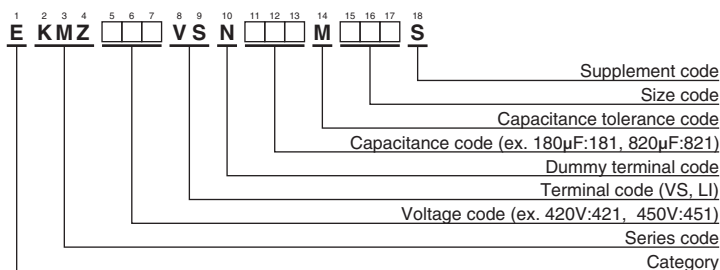
## ◆ DIMENSIONS [mm]

- Terminal Code : VS (φ22 to φ30) : Standard



The standard design has no plastic disc.

## ◆ PART NUMBERING SYSTEM



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

KMZ Series

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
420	150	22 × 25	0.20	0.87	EKMZ421VSN151MP25S
	180	22 × 30	0.20	1.00	EKMZ421VSN181MP30S
	180	25.4 × 25	0.20	1.02	EKMZ421VSN181MQ25S
	220	22 × 35	0.20	1.13	EKMZ421VSN221MP35S
	270	22 × 40	0.20	1.27	EKMZ421VSN271MP40S
	270	25.4 × 30	0.20	1.28	EKMZ421VSN271MQ30S
	270	30 × 25	0.20	1.28	EKMZ421VSN271MR25S
	330	22 × 45	0.20	1.44	EKMZ421VSN331MP45S
	330	25.4 × 35	0.20	1.48	EKMZ421VSN331MQ35S
	390	22 × 55	0.20	1.63	EKMZ421VSN391MP55S
	390	25.4 × 40	0.20	1.64	EKMZ421VSN391MQ40S
	390	30 × 30	0.20	1.55	EKMZ421VSN391MR30S
	470	25.4 × 50	0.20	1.86	EKMZ421VSN471MQ50S
	470	30 × 35	0.20	1.74	EKMZ421VSN471MR35S
	560	25.4 × 55	0.20	2.09	EKMZ421VSN561MQ55S
	560	30 × 40	0.20	1.96	EKMZ421VSN561MR40S
680	30 × 50	0.20	2.25	EKMZ421VSN681MR50S	
820	30 × 55	0.20	2.52	EKMZ421VSN821MR55S	

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
450	120	22 × 25	0.20	0.78	EKMZ451VSN121MP25S
	180	22 × 30	0.20	1.00	EKMZ451VSN181MP30S
	180	25.4 × 25	0.20	1.02	EKMZ451VSN181MQ25S
	220	22 × 35	0.20	1.13	EKMZ451VSN221MP35S
	220	25.4 × 30	0.20	1.16	EKMZ451VSN221MQ30S
	270	22 × 45	0.20	1.30	EKMZ451VSN271MP45S
	270	25.4 × 35	0.20	1.34	EKMZ451VSN271MQ35S
	270	30 × 25	0.20	1.28	EKMZ451VSN271MR25S
	330	22 × 50	0.20	1.47	EKMZ451VSN331MP50S
	330	25.4 × 40	0.20	1.51	EKMZ451VSN331MQ40S
	330	30 × 30	0.20	1.43	EKMZ451VSN331MR30S
	390	22 × 55	0.20	1.63	EKMZ451VSN391MP55S
	390	25.4 × 45	0.20	1.67	EKMZ451VSN391MQ45S
	390	30 × 35	0.20	1.59	EKMZ451VSN391MR35S
	470	25.4 × 55	0.20	1.91	EKMZ451VSN471MQ55S
	470	30 × 40	0.20	1.79	EKMZ451VSN471MR40S
	560	25.4 × 60	0.20	2.13	EKMZ451VSN561MQ60S
	560	30 × 45	0.20	2.01	EKMZ451VSN561MR45S
680	30 × 50	0.20	2.25	EKMZ451VSN681MR50S	
820	30 × 60	0.20	2.56	EKMZ451VSN821MR60S	

◆RATED RIPPLE CURRENT MULTIPLIERS

⊙ Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
Multipliers	0.77	1.00	1.16	1.30	1.41	1.43

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.