

# KMT Series

- Higher ripple current from KMS series
- Endurance with ripple current : 3,000 hours at 105°C
- Rated voltage range : 420, 450V<sub>dc</sub>, Capacitance range : 82 to 680μF
- For inverter control, switching power supplies
- Non solvent resistant type
- RoHS2 Compliant

KMT

Higher ripple  
KMS

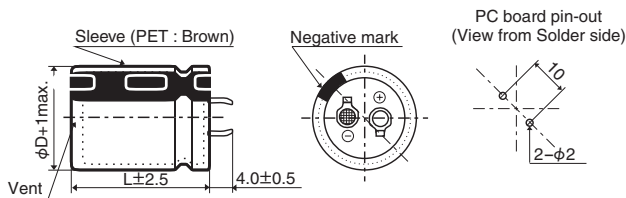


## SPECIFICATIONS

| Items   | Characteristics   |                                       |
|---|---|---------------------------------------|
| <b>Category</b>   | -25 to +105°C   |                                       |
| <b>Temperature Range</b>                                      |   |                                       |
| <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<br>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 3,000 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         |

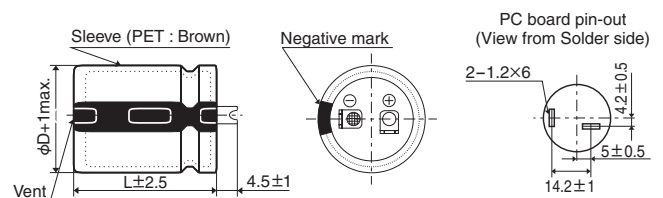
## DIMENSIONS [mm]

● Terminal Code : VS (φ22 to φ35) : Standard

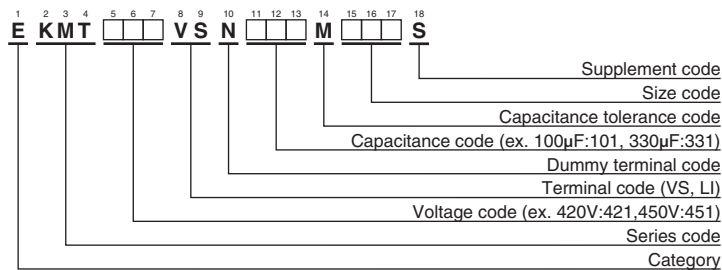


The standard design has no plastic disc.

● Terminal Code : LI (φ35)



## PART NUMBERING SYSTEM



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

KMT 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.           | WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | tan δ              | Rated ripple current (Arms/105°C, 120Hz) | Part No.           |
|-----------------------|----------|--------------------|-------|--|--------------------|-----------------------|----------|--------------------|--------------------|--|--------------------|
| 420                   | 100      | 22 × 25            | 0.20  | 0.89                                     | EKMT421VSN101MP25S | 450                   | 82       | 22 × 25            | 0.20               | 0.81                                     | EKMT451VSN820MP25S |
|                       | 120      | 22 × 30            | 0.20  | 1.06                                     | EKMT421VSN121MP30S |                       | 100      | 22 × 30            | 0.20               | 0.97                                     | EKMT451VSN101MP30S |
|                       | 120      | 25.4 × 25          | 0.20  | 1.09                                     | EKMT421VSN121MQ25S |                       | 100      | 25.4 × 25          | 0.20               | 1.04                                     | EKMT451VSN101MQ25S |
|                       | 150      | 22 × 35            | 0.20  | 1.21                                     | EKMT421VSN151MP35S |                       | 120      | 22 × 35            | 0.20               | 1.08                                     | EKMT451VSN121MP35S |
|                       | 180      | 22 × 40            | 0.20  | 1.34                                     | EKMT421VSN181MP40S |                       | 150      | 22 × 40            | 0.20               | 1.22                                     | EKMT451VSN151MP40S |
|                       | 180      | 25.4 × 30          | 0.20  | 1.28                                     | EKMT421VSN181MQ30S |                       | 150      | 25.4 × 35          | 0.20               | 1.31                                     | EKMT451VSN151MQ35S |
|                       | 180      | 30 × 25            | 0.20  | 1.42                                     | EKMT421VSN181MR25S |                       | 150      | 30 × 25            | 0.20               | 1.31                                     | EKMT451VSN151MR25S |
|                       | 220      | 22 × 45            | 0.20  | 1.47                                     | EKMT421VSN221MP45S |                       | 180      | 22 × 45            | 0.20               | 1.35                                     | EKMT451VSN181MP45S |
|                       | 220      | 22 × 50            | 0.20  | 1.60                                     | EKMT421VSN221MP50S |                       | 180      | 22 × 50            | 0.20               | 1.42                                     | EKMT451VSN181MP50S |
|                       | 220      | 25.4 × 35          | 0.20  | 1.47                                     | EKMT421VSN221MQ35S |                       | 180      | 25.4 × 40          | 0.20               | 1.35                                     | EKMT451VSN181MQ40S |
|                       | 220      | 30 × 30            | 0.20  | 1.64                                     | EKMT421VSN221MR30S |                       | 180      | 30 × 30            | 0.20               | 1.49                                     | EKMT451VSN181MR30S |
|                       | 220      | 35 × 25            | 0.20  | 1.64                                     | EKMT421VSN221MA25S |                       | 180      | 35 × 25            | 0.20               | 1.60                                     | EKMT451VSN181MA25S |
|                       | 270      | 25.4 × 40          | 0.20  | 1.63                                     | EKMT421VSN271MQ40S |                       | 220      | 25.4 × 45          | 0.20               | 1.55                                     | EKMT451VSN221MQ45S |
|                       | 270      | 25.4 × 45          | 0.20  | 1.79                                     | EKMT421VSN271MQ45S |                       | 220      | 30 × 35            | 0.20               | 1.71                                     | EKMT451VSN221MR35S |
|                       | 270      | 30 × 35            | 0.20  | 1.87                                     | EKMT421VSN271MR35S |                       | 270      | 25.4 × 50          | 0.20               | 1.74                                     | EKMT451VSN271MQ50S |
|                       | 330      | 25.4 × 50          | 0.20  | 1.93                                     | EKMT421VSN331MQ50S |                       | 270      | 30 × 40            | 0.20               | 1.90                                     | EKMT451VSN271MR40S |
|                       | 330      | 30 × 40            | 0.20  | 2.10                                     | EKMT421VSN331MR40S |                       | 270      | 35 × 30            | 0.20               | 1.90                                     | EKMT451VSN271MA30S |
|                       | 330      | 35 × 30            | 0.20  | 2.05                                     | EKMT421VSN331MA30S |                       | 330      | 30 × 45            | 0.20               | 2.20                                     | EKMT451VSN331MR45S |
|                       | 390      | 30 × 45            | 0.20  | 2.32                                     | EKMT421VSN391MR45S |                       | 330      | 35 × 35            | 0.20               | 2.20                                     | EKMT451VSN331MA35S |
|                       | 390      | 35 × 35            | 0.20  | 2.32                                     | EKMT421VSN391MA35S |                       | 390      | 30 × 50            | 0.20               | 2.40                                     | EKMT451VSN391MR50S |
| 470                   | 30 × 50  | 0.20               | 2.51  | EKMT421VSN471MR50S                       | 390                | 35 × 40               | 0.20     | 2.42               | EKMT451VSN391MA40S |  |                    |
| 470                   | 35 × 40  | 0.20               | 2.62  | EKMT421VSN471MA40S                       | 470                | 35 × 45               | 0.20     | 2.67               | EKMT451VSN471MA45S |  |                    |
| 560                   | 35 × 45  | 0.20               | 2.88  | EKMT421VSN561MA45S                       | 560                | 35 × 50               | 0.20     | 2.85               | EKMT451VSN561MA50S |  |                    |
| 680                   | 35 × 50  | 0.20               | 3.10  | EKMT421VSN681MA50S                       |                    |                       |          |                    |                    |  |                    |

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Frequency(Hz)           | 50   | 120  | 300  | 1k   | 10k  | 50k  |
|-------------------------|------|------|------|------|------|------|
| 420, 450V <sub>dc</sub> | 0.68 | 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.