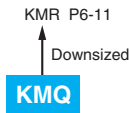


# KMQ Series

- Endurance with ripple current : 2,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant



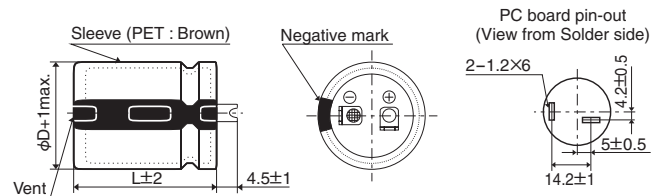
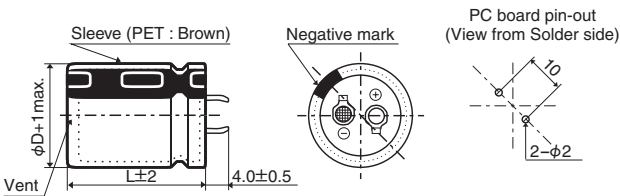
## SPECIFICATIONS

| Items  | Characteristics   |                                       |  |                     |  |             |  |             |  |            |  |      |  |      |
|--|---|---------------------------------------|--|---------------------|--|-------------|--|-------------|--|------------|--|------|--|------|
| Category   | -40 to +105°C (35&50V <sub>dc</sub> ), -25 to +105°C (160 to 450V <sub>dc</sub> )   |                                       |  |                     |  |             |  |             |  |            |  |      |  |      |
| Temperature Range                                      |   |                                       |  |                     |  |             |  |             |  |            |  |      |  |      |
| Rated Voltage Range                                    | 35&50V <sub>dc</sub> , 160 to 450V <sub>dc</sub>  |                                       |  |                     |  |             |  |             |  |            |  |      |  |      |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)   |                                       |  |                     |  |             |  |             |  |            |  |      |  |      |
| Leakage Current  | I ≤ 3√CV<br>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 <sub>dc</sub> )  | 35V                                   |  | 50V                 |  | 160 to 250V |  | 315 to 400V |  | 420 & 450V |  |      |  |      |
|  | Nominal capacitance (µF)  | 10,000 > C ≥ 10,000                   |  | 10,000 > C ≥ 10,000 |  | —           |  | —           |  | —          |  |      |  |      |
|  | tan δ (Max.)  | 0.30                                  |  | 0.35                |  | 0.25        |  | 0.30        |  | 0.15       |  | 0.15 |  | 0.20 |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )  | 35&50V                                |  | 160 to 250V         |  | 315 to 450V |  |             |  |            |  |      |  |      |
|  | Z(-25°C)/Z(+20°C)   | 4                                     |  | 4                   |  | 8           |  |             |  |            |  |      |  |      |
|  | Z(-40°C)/Z(+20°C)   | 10                                    |  | —                   |  | —           |  |             |  |            |  |      |  |      |
| 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]

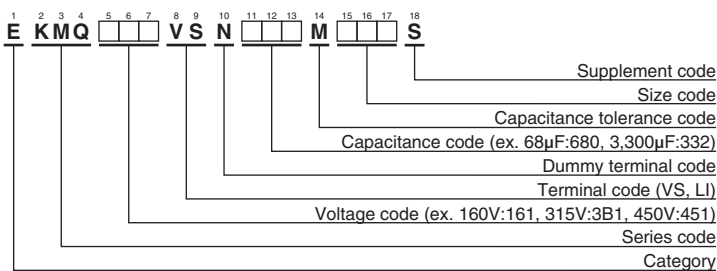
Terminal Code : VS (φ22 to φ35) : Standard

Terminal Code : LI (φ35)



The standard design has no plastic disc.

## PART NUMBERING SYSTEM



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







## KMQ Series

### ◆ RATED RIPPLE CURRENT MULTIPLIERS

#### ● Frequency Multipliers

| Frequency(Hz)             | 50   | 120  | 300  | 1k   | 10k  | 50k  |
|---------------------------|------|------|------|------|------|------|
| 35, 50V <sub>dc</sub>     | 0.95 | 1.00 | 1.03 | 1.05 | 1.08 | 1.08 |
| 160 to 250V <sub>dc</sub> | 0.81 | 1.00 | 1.17 | 1.32 | 1.45 | 1.50 |
| 315 to 450V <sub>dc</sub> | 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.