

## CHEMI-CON LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS

- The lower temperature range of the category temperature range has been expended.
- Downsized from KMW series
- Endurance with ripple current : 2,000 hours at 105°C
- Non solvent resistant type
- ●RoHS2 Compliant



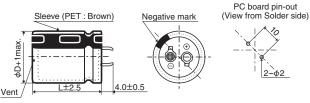


#### SPECIFICATIONS

| Items                         | Characteristics  |                            |                    |                  |  |  |  |
|-------------------------------|--|----------------------------|--------------------|------------------|--|--|--|
| Category<br>Temperature Range | -40 to +105℃   |                            |                    |                  |  |  |  |
| Rated Voltage Range           | 420 & 450V <sub>dc</sub>   |                            |                    |                  |  |  |  |
| 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            | Rated voltage (Vdc)  | 420 & 450V                 |                    |                  |  |  |  |
| (tan δ)                       | tan δ (Max.)   | 0.20                       |                    | (at 20°C, 120Hz) |  |  |  |
| Low Temperature               | Rated voltage (Vdc)  | 420 & 450V                 |                    |                  |  |  |  |
| Characteristics               | Z(-25°C)/Z(+20°C)  | 8                          |                    |                  |  |  |  |
| (Max. Impedance Ratio)        |  |                            | •                  | (at 120Hz)       |  |  |  |
| Endurance                     | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage wi 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 init          | tial value         |                  |  |  |  |
|                               | D.F. (tan δ )  | ≦200% of the initia        | al specified value |                  |  |  |  |
|                               | Leakage current  | ≦The initial specif        | ied 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 w voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 51 |                            |                    |                  |  |  |  |
|                               | Capacitance change   | ≦±15% of the initial value |                    |                  |  |  |  |
|                               | D.F. (tan $\delta$ )   | ≦150% of the initial       | al specified value |                  |  |  |  |
|                               | Leakage current  | ≦The initial specif        | ied value          |                  |  |  |  |

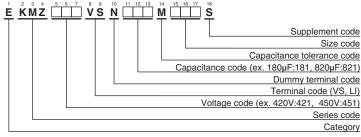
### **◆DIMENSIONS** [mm]

•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)"





#### **STANDARD RATINGS**

| WV<br>(V <sub>dc</sub> ) | Cap<br>(µF) | Case size<br>φD×L(mm) | tan δ | Rated ripple<br>current<br>(Arms/<br>105°C, 120Hz) | Part No.           |  |  |
|--------------------------|-------------|-----------------------|-------|--|--------------------|--|--|
|                          | 150         | 22 × 25               | 0.20  | 0.87   | EKMZ421VSN151MP25S |  |  |
|                          | 180         | 22 × 30               | 0.20  | 1.00   | EKMZ421VSN181MP30S |  |  |
|                          | 180         | $25.4 \times 25$      | 0.20  | 1.02   | EKMZ421VSN181MQ25S |  |  |
|                          | 220         | 22 × 35               | 0.20  | 1.13   | EKMZ421VSN221MP35S |  |  |
|                          | 270         | 22 × 40               | 0.20  | 1.27   | EKMZ421VSN271MP40S |  |  |
|                          | 270         | $25.4 \times 30$      | 0.20  | 1.28   | EKMZ421VSN271MQ30S |  |  |
|                          | 270         | 30 × 25               | 0.20  | 1.28   | EKMZ421VSN271MR25S |  |  |
|                          | 330         | 22 × 45               | 0.20  | 1.44   | EKMZ421VSN331MP45S |  |  |
| 420                      | 330         | $25.4 \times 35$      | 0.20  | 1.48   | EKMZ421VSN331MQ35S |  |  |
| 420                      | 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         | $25.4 \times 50$      | 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<br>(V <sub>dc</sub> ) | Cap<br>(µF) | Case size φD×L(mm) | tan δ | Rated ripple<br>current<br>(Arms/<br>105°C, 120Hz) | Part No.           |
|--------------------------|-------------|--------------------|-------|--|--------------------|
|                          | 120         | 22 × 25            | 0.20  | 0.78   | EKMZ451VSN121MP25S |
|                          | 180         | 22 × 30            | 0.20  | 1.00   | EKMZ451VSN181MP30S |
|                          | 180         | $25.4 \times 25$   | 0.20  | 1.02   | EKMZ451VSN181MQ25S |
|                          | 220         | 22 × 35            | 0.20  | 1.13   | EKMZ451VSN221MP35S |
|                          | 220         | $25.4 \times 30$   | 0.20  | 1.16   | EKMZ451VSN221MQ30S |
|                          | 270         | 22 × 45            | 0.20  | 1.30   | EKMZ451VSN271MP45S |
|                          | 270         | $25.4 \times 35$   | 0.20  | 1.34   | EKMZ451VSN271MQ35S |
|                          | 270         | 30 × 25            | 0.20  | 1.28   | EKMZ451VSN271MR25S |
|                          | 330         | 22 × 50            | 0.20  | 1.47   | EKMZ451VSN331MP50S |
| 450                      | 330         | $25.4 \times 40$   | 0.20  | 1.51   | EKMZ451VSN331MQ40S |
| 430                      | 330         | 30 × 30            | 0.20  | 1.43   | EKMZ451VSN331MR30S |
|                          | 390         | 22 × 55            | 0.20  | 1.63   | EKMZ451VSN391MP55S |
|                          | 390         | $25.4 \times 45$   | 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         | $25.4 \times 60$   | 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 |

#### **TABLE 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 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.

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.



- 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.
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  The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
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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

# 单击下面可查看定价,库存,交付和生命周期等信息

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