

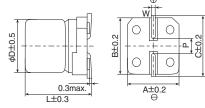
- Endurance : 5,000 hours at 105°C
- Low impedance
- Rated voltage range : 6.3 to 35V
- Nominal capacitance range : 10 to 150µF
- Suitable for low profile products
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

# **\$**SPECIFICATIONS

| Items                         | Characteristics   |                                      |          |          |           |          |       |  |  |  |
|-------------------------------|---|--------------------------------------|----------|----------|-----------|----------|-------|--|--|--|
| Category<br>Temperature Range | -25 to +105℃  |                                      |          |          |           |          |       |  |  |  |
| Rated Voltage Range           | 6.3 to 35V <sub>dc</sub>  |                                      |          |          |           |          |       |  |  |  |
| Capacitance Tolerance         | ±20%(M) (at 20°C,120Hz)   |                                      |          |          |           |          |       |  |  |  |
| Leakage Current               | I=0.01CV or 3μA, whichever is greater<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C, after 2 minutes)   |                                      |          |          |           |          |       |  |  |  |
| Dissipation Factor            | Rated voltage (V <sub>dc</sub> )  | 6.3V                                 | 10V      | 16V      | 25V       | 35V      |       |  |  |  |
| $(\tan \delta)$               | tan $\delta$ (Max.)   | 0.32                                 | 0.28     | 0.26     | 0.16      | 0.14     |       |  |  |  |
| Low Temperature               | Rated voltage(Vdc)  | 6.3V                                 | 10V      | 16V      | 25V       | 35V      | /     |  |  |  |
| Characteristics               | Z(-10°C)/Z(+20°C)   | 4                                    | 3        | 2        | 2         | 2        |       |  |  |  |
| (Max. Impedance Ratio)        | (at 120Hz)  |                                      |          |          |           |          |       |  |  |  |
| Endurance                     | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 5,000 hours at 105°C.   |                                      |          |          |           |          |       |  |  |  |
|                               | Capacitance change  | ≦±:                                  | 30% of   | the ini  | tial valu | le       |       |  |  |  |
|                               | D.F. $(\tan \delta)$ $\leq 300\%$ of the initial specified value  |                                      |          |          |           |          | value |  |  |  |
|                               | Leakage current   | ≦Th                                  | e initia | specif   | ied val   | ue       |       |  |  |  |
| Shelf Life                    | nelf Life The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 o |                                      |          |          |           |          |       |  |  |  |
|                               | Capacitance change  | $\leq \pm 30\%$ of the initial value |          |          |           | le       |       |  |  |  |
|                               | D.F. (tan δ )   | ≦30                                  | 0% of t  | he initi | al spec   | ified va | value |  |  |  |
|                               | Leakage current   | ≦The initial specified value         |          |          |           | ue       |       |  |  |  |

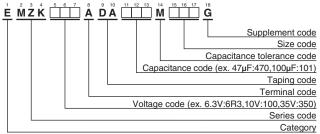
## DIMENSIONS [mm]

•Terminal Code : A



| Size code | D   | L   | Α   | В   | С   | W          | Р   |
|-----------|-----|-----|-----|-----|-----|------------|-----|
| E61       | 5   | 5.8 | 5.3 | 5.3 | 5.9 | 0.5 to 0.8 | 1.4 |
| F61       | 6.3 | 5.8 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |

# PART NUMBERING SYSTEM



Please refer to "Product code guide (surface mount type)"

#### 



| Rated voltage symbol |                                   |   |   |   |   |  |  |
|----------------------|-----------------------------------|---|---|---|---|--|--|
| ated voltage (Vdc)   | ted voltage (Vdc) 6.3 10 16 25 35 |   |   |   |   |  |  |
| Symbol               | j                                 | Α | С | Е | V |  |  |

| Hated voltage (Vdc) | 6.3 | 10 | 16 | 25 |
|---------------------|-----|----|----|----|
| Symbol              | j   | Α  | С  | Е  |
|                     |     |    |    |    |



MVY Longer life

P102





## **♦STANDARD RATINGS**

| WV<br>(Vdc) | Сар<br>(µF) | Size code | Impedance<br>(Ω max./20°C, 100kHz) | Rated ripple current<br>(mArms/105℃, 100kHz) | Part No.           |
|-------------|-------------|-----------|------------------------------------|--|--------------------|
| 6.3         | 100         | E61       | 2.2                                | 95   | EMZK6R3ADA101ME61G |
| 10          | 150         | F61       | 1.1                                | 140  | EMZK100ADA151MF61G |
|             | 33          | E61       | 2.2                                | 95   | EMZK160ADA330ME61G |
| 16          | 47          | E61       | 2.2                                | 95   | EMZK160ADA470ME61G |
|             | 100         | F61       | 1.1                                | 140  | EMZK160ADA101MF61G |
| 25          | 68          | F61       | 1.1                                | 140  | EMZK250ADA680MF61G |
|             | 10          | E61       | 2.2                                | 95   | EMZK350ADA100ME61G |
|             | 10          | F61       | 1.1                                | 140  | EMZK350ADA100MF61G |
| 35          | 22          | E61       | 2.2                                | 95   | EMZK350ADA220ME61G |
| 35          | 22          | F61       | 1.1                                | 140  | EMZK350ADA220MF61G |
|             | 33          | F61       | 1.1                                | 140  | EMZK350ADA330MF61G |
|             | 47          | F61       | 1.1                                | 140  | EMZK350ADA470MF61G |

## **♦**RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Frequency(Hz)            | 120  | 1k   | 10k  | 100k |
|--------------------------|------|------|------|------|
| 6.3 to 35V <sub>dc</sub> | 0.40 | 0.75 | 0.90 | 1.00 |

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.