

# ME-CZ Series

Small Standard

Wide Temperature

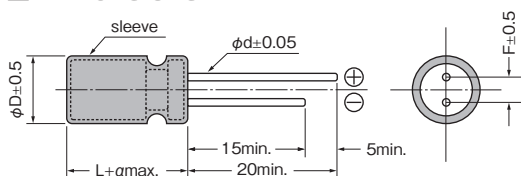


- 105°C 1,000 to 3,000hours
- Solvent proof (within 5 minutes)

## Specifications

| Items                              | Condition                                                   |                           | Specifications                                                                               |      |      |      |      |      |      |      |
|------------------------------------|-------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|
| Rated voltage (V)                  | —                                                           |                           | 6.3                                                                                          | 10   | 16   | 25   | 35   | 50   | 63   | 100  |
| Surge voltage (V)                  | Room temperature                                            |                           | 8.0                                                                                          | 13   | 20   | 32   | 44   | 63   | 79   | 125  |
| Category temperature range (°C)    | —                                                           |                           | -55 to +105                                                                                  |      |      |      |      |      |      |      |
| Capacitance tolerance (%)          | 120Hz/20°C                                                  |                           | M : ±20                                                                                      |      |      |      |      |      |      |      |
| Dissipation Factor(tan δ)          | tanδ(max.) 120Hz/20°C                                       |                           | 0.28                                                                                         | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 |
|                                    |                                                             |                           | Exceeding 1,000μF, +0.02 every 1,000μF                                                       |      |      |      |      |      |      |      |
| Leakage current(LC)                | μA/after 2minutes (max.), 20°C                              |                           | The greater value of either 0.01CV or 3                                                      |      |      |      |      |      |      |      |
| Impedance ratio at low temperature | Based on the value at 120Hz, +20°C                          | -40°C Z/Z <sub>20°C</sub> | 4                                                                                            | 4    | 3    | 3    | 2    | 2    | 2    | 2    |
|                                    |                                                             | -55°C Z/Z <sub>20°C</sub> | 10                                                                                           | 8    | 6    | 5    | 4    | 3    | 3    | 3    |
| Endurance                          | 105°C rated voltage applied (With the rated ripple current) | Test                      | φ5 to φ8 : 1,000hours, φ10 : 2,000hours, φ12.5 to φ18 : 3,000hours                           |      |      |      |      |      |      |      |
|                                    |                                                             | ΔC/C                      | Within ±25% of the initial value                                                             |      |      |      |      |      |      |      |
|                                    |                                                             | tanδ                      | Less than 200% of the specified value                                                        |      |      |      |      |      |      |      |
|                                    |                                                             | LC                        | Less than the specified value                                                                |      |      |      |      |      |      |      |
| Shelf Life                         | 105°C, 1,000hours(with no voltage load)                     |                           | Shall meet the endurance spec above after voltage treatment at 20deg.C per JIS C 5101-4 4.1. |      |      |      |      |      |      |      |

## Dimensions


 $\alpha : L < 20 \quad \alpha = 1.5, L \geq 20 \quad \alpha = 2.0$ 

A pressure relief vent is provided for  $\phi D = 6.3$  or bigger

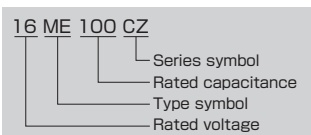
(Unit : mm)

| φD | 5   | 6.3 | 8   | 10  | 12.5 | 16  | 18  |
|----|-----|-----|-----|-----|------|-----|-----|
| F  | 2.0 | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| φd | 0.5 | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 |

## Size, Impedance, Rated Ripple Current

| Case size<br>φD×L (mm) | Items<br>V | 6.3                 |                                   |                                               | 10                  |                                   |                                               |
|------------------------|------------|---------------------|-----------------------------------|-----------------------------------------------|---------------------|-----------------------------------|-----------------------------------------------|
|                        |            | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) |
| 5×11                   |            | 220                 | 1.4                               | 160                                           | 100                 | 1.4                               | 150                                           |
| 6.3×11                 |            | 330                 | 0.58                              | 240                                           | 220                 | 0.58                              | 240                                           |
| 6.3×11                 |            | 470                 | 0.55                              | 250                                           | 330                 | 0.55                              | 250                                           |
| 8×11.5                 |            | 1000                | 0.26                              | 450                                           | 470                 | 0.39                              | 370                                           |
| 10×12.5                |            |                     |                                   |                                               | 1000                | 0.16                              | 560                                           |
| 10×16                  |            | 2200                | 0.12                              | 760                                           |                     |                                   |                                               |
| 10×20                  |            | 3300                | 0.10                              | 900                                           | 2200                | 0.10                              | 900                                           |
| 12.5×20                |            | 4700                | 0.072                             | 1100                                          | 3300                | 0.074                             | 1100                                          |
| 12.5×25                |            | 6800                | 0.054                             | 1420                                          | 4700                | 0.054                             | 1420                                          |
| 16×25                  |            | 10000               | 0.043                             | 1700                                          | 6800                | 0.043                             | 1700                                          |
| 16×31.5                |            |                     |                                   |                                               | 10000               | 0.035                             | 1950                                          |
| 16×35.5                |            | 15000               | 0.032                             | 2100                                          |                     |                                   |                                               |
| 18×35.5                |            |                     |                                   |                                               | 15000               | 0.028                             | 2400                                          |

## Part number



# Size, Impedance, Rated Ripple Current

| Case size<br>φD×L(mm) | Items | 16                  |                                   |                                               | 25                  |                                   |                                               |
|-----------------------|-------|---------------------|-----------------------------------|-----------------------------------------------|---------------------|-----------------------------------|-----------------------------------------------|
|                       |       | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) |
| 5×11                  |       | 100                 | 1.4                               | 150                                           | 47                  | 1.4                               | 150                                           |
| 6.3×11                |       | 220                 | 0.55                              | 240                                           | 100                 | 0.60                              | 240                                           |
| 8×11.5                |       | 330                 | 0.35                              | 370                                           | 220                 | 0.39                              | 370                                           |
| 8×11.5                |       | 470                 | 0.28                              | 450                                           | 330                 | 0.34                              | 400                                           |
| 10×12.5               |       |                     |                                   |                                               | 470                 | 0.17                              | 560                                           |
| 10×16                 |       | 1000                | 0.13                              | 760                                           |                     |                                   |                                               |
| 10×20                 |       |                     |                                   |                                               | 1000                | 0.10                              | 900                                           |
| 12.5×20               |       | 2200                | 0.075                             | 1100                                          |                     |                                   |                                               |
| 12.5×25               |       | 3300                | 0.054                             | 1320                                          | 2200                | 0.062                             | 1320                                          |
| 16×25                 |       | 4700                | 0.043                             | 1600                                          | 3300                | 0.043                             | 1600                                          |
| 16×31.5               |       | 6800                | 0.035                             | 1900                                          | 4700                | 0.035                             | 1900                                          |
| 18×35.5               |       | 10000               | 0.028                             | 2300                                          | 6800                | 0.028                             | 2200                                          |

| Case size<br>φD×L(mm) | Items | 35                  |                                   |                                               | 50                  |                                   |                                               |
|-----------------------|-------|---------------------|-----------------------------------|-----------------------------------------------|---------------------|-----------------------------------|-----------------------------------------------|
|                       |       | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) |
| 5×11                  |       |                     |                                   |                                               | 2.2                 | 5.5                               | 40                                            |
| 5×11                  |       |                     |                                   |                                               | 3.3                 | 4.0                               | 50                                            |
| 5×11                  |       |                     |                                   |                                               | 4.7                 | 2.8                               | 80                                            |
| 5×11                  |       |                     |                                   |                                               | 10                  | 2.3                               | 90                                            |
| 5×11                  |       | 33                  | 2.1                               | 120                                           | 22                  | 2.2                               | 110                                           |
| 5×11                  |       | 47                  | 2.1                               | 140                                           | 33                  | 2.1                               | 120                                           |
| 6.3×11                |       | 100                 | 1.1                               | 180                                           | 47                  | 1.1                               | 180                                           |
| 8×11.5                |       | 220                 | 0.46                              | 360                                           | 100                 | 0.55                              | 310                                           |
| 10×12.5               |       | 330                 | 0.26                              | 500                                           | 220                 | 0.30                              | 500                                           |
| 10×16                 |       | 470                 | 0.18                              | 650                                           | 330                 | 0.20                              | 650                                           |
| 10×20                 |       |                     |                                   |                                               | 470                 | 0.13                              | 800                                           |
| 12.5×20               |       | 1000                | 0.11                              | 900                                           |                     |                                   |                                               |
| 12.5×25               |       |                     |                                   |                                               | 1000                | 0.10                              | 1100                                          |
| 16×25                 |       | 2200                | 0.056                             | 1400                                          |                     |                                   |                                               |
| 16×31.5               |       |                     |                                   |                                               | 2200                | 0.055                             | 1650                                          |
| 16×35.5               |       | 3300                | 0.038                             | 1800                                          |                     |                                   |                                               |
| 18×35.5               |       | 4700 ★              | 0.035                             | 2000                                          | 3300                | 0.035                             | 2000                                          |

★ Available 40V(40ME4700CZ)

| Case size<br>φD×L(mm) | Items | 63                  |                                   |                                               | 100                 |                                   |                                               |
|-----------------------|-------|---------------------|-----------------------------------|-----------------------------------------------|---------------------|-----------------------------------|-----------------------------------------------|
|                       |       | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) | Capacitance<br>(μF) | Impedance(Ωmax.)<br>(20°C/100kHz) | Rated ripple current(mArms)<br>(105°C/100kHz) |
| 5×11                  |       | 2.2                 | 8.3                               | 42                                            | 2.2                 | 11                                | 42                                            |
| 5×11                  |       | 3.3                 | 6.0                               | 58                                            | 3.3                 | 8.0                               | 58                                            |
| 5×11                  |       | 4.7                 | 4.2                               | 64                                            | 4.7                 | 5.6                               | 64                                            |
| 5×11                  |       | 10                  | 2.8                               | 90                                            |                     |                                   |                                               |
| 5×11                  |       | 22                  | 2.4                               | 140                                           |                     |                                   |                                               |
| 6.3×11                |       | 33                  | 1.4                               | 200                                           | 10                  | 1.7                               | 108                                           |
| 6.3×11                |       | 47                  | 1.3                               | 240                                           |                     |                                   |                                               |
| 8×11.5                |       |                     |                                   |                                               | 22                  | 0.83                              | 235                                           |
| 8×12.5                |       | 100                 | 0.60                              | 300                                           | 33                  | 0.60                              | 300                                           |
| 10×12.5               |       |                     |                                   |                                               | 47                  | 0.39                              | 330                                           |
| 10×16                 |       | 220                 | 0.22                              | 520                                           |                     |                                   |                                               |
| 10×20                 |       | 330                 | 0.17                              | 765                                           | 100                 | 0.24                              | 450                                           |
| 12.5×20               |       | 470                 | 0.14                              | 960                                           |                     |                                   |                                               |
| 12.5×25               |       |                     |                                   |                                               | 220                 | 0.15                              | 700                                           |
| 16×25                 |       | 1000                | 0.065                             | 1100                                          | 330                 | 0.090                             | 950                                           |
| 16×30                 |       |                     |                                   |                                               | 470                 | 0.085                             | 1100                                          |

Please refer to page 14 for ripple current frequency coefficients.