# ELECTRIC DOUBLE LAYER CAPACITORS "EVerCAP®"

## nichicon



Radial Lead Type, Standard

- Standard type (2.7V).
- Suitable for quick charge and discharge.
- Wide temperature range (- 25 to +70°C).
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



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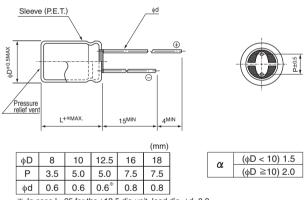
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#### Specifications

| Item                         | Performance Characteristics   |                           |   |  |  |
|------------------------------|---|---------------------------|---|--|--|
| Category Temperature Range   | - 25 to +70°C   |                           |   |  |  |
| Rated Voltage Range          | 2.7V  |                           |   |  |  |
| Rated Capacitance Range      | 1 to 47F See Note   |                           |   |  |  |
| Capacitance Tolerance        | ±20% , 20°C   |                           |   |  |  |
| Stability at Low Temperature | Capacitance (– 25°C) / Capacitance (+20°C) ×100 ≥ 70% ESR (– 25°C) / ESR (+20°C) ≤ 4  |                           |   |  |  |
| ESR, DCR*                    | Refer to the table below (20°C). *DC internal resistance  |                           |   |  |  |
| Endurance                    | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 70°C.         | Capacitance change<br>ESR | Within ±30% of the initial capacitance value<br>300% or less than the initial specified value |  |  |
| Shelf Life                   | The specifications listed at right shall be met when the capacitors are restored to 20°C after storing the capacitors under no load for 1000 hours at 70°C. | Capacitance change<br>ESR | Within ±30% of the initial capacitance value<br>300% or less than the initial specified value |  |  |
| Humidity Endurance           | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 500 hours at 40°C 90%RH.    | Capacitance change<br>ESR | Within ±30% of the initial capacitance value<br>300% or less than the initial specified value |  |  |
| Marking                      | Printed with white color letter on black sleeve.  |                           |   |  |  |

#### Drawing



 $\%\,$  In case L>25 for the  $\phi12.5$  dia unit, lead dia  $\,\phid{=}0.8$ 

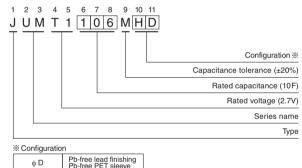
• Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

#### Dimensions

| Rated Voltage<br>( Code ) | Rated<br>Capacitance<br>(F) | Code | ESR<br>(Ω)<br>(at 1kHz) | DCR※<br>Typical (Ω) | Case size<br>∳ D × L (mm) |
|---------------------------|-----------------------------|------|-------------------------|---------------------|---------------------------|
| 2.7V<br>(T1)              | 1                           | 105  | 1.8                     | 3                   | 8×11.5                    |
|                           | 2.2                         | 225  | 1.0                     | 1.3                 | 8 × 20                    |
|                           | 3.3                         | 335  | 0.6                     | 1.0                 | 10 × 20                   |
|                           | 4.7                         | 475  | 0.4                     | 0.6                 | 12.5 × 20                 |
|                           | 10                          | 106  | 0.2                     | 0.25                | 12.5 × 31.5               |
|                           | 22                          | 226  | 0.07                    | 0.13                | 16 × 31.5                 |
|                           | 33                          | 336  | 0.06                    | 0.08                | 18 × 31.5                 |
|                           | 47                          | 476  | 0.05                    | 0.06                | 18 × 40                   |

\* The listed DCR value is typical and therefore not a guaranteed value.

### Type numbering system (Example : 2.7V 10F)



| ~ Connyuration |  |  |  |  |
|----------------|--|--|--|--|
| φD             | Pb-free lead finishing<br>Pb-free PET sleeve |  |  |  |
| 8 · 10         | PD   |  |  |  |
| 12.5 to 18     | HD   |  |  |  |
|                |  |  |  |  |

Note :

- The capacitance calculated from discharge time ( $\Delta T)$  with constant current ( i ) after 30minuite charge with rated voltage (2.7V).
- The discharge current ( i ) is 0.01  $\times$  rated capacitance (F).

The discharge time ( $\Delta T)$  measured between 2V and 1V with constant current.

The capacitance calculated bellow.

Capacitance (F) =  $i \times \Delta T$ 

