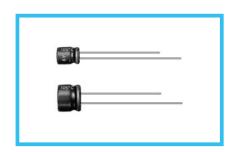




- Low impedance over wide temperature range of -55 to +105°C, with 5mm height.
- Suited for DC-DC converters where smaller case size and lower impedance are required.
- Compliant to the RoHS directive (2002/95/EC).

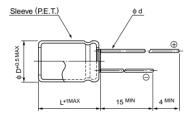


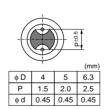


## ■Specifications

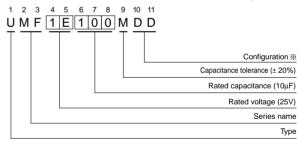
| Item                          | Performance Characteristics  |                        |      |                          |      |    |  |                     |   |  |  |
|-------------------------------|--|------------------------|------|--------------------------|------|----|--|---------------------|---|--|--|
| Category Temperature Range    | -55 to +105°C  |                        |      |                          |      |    |  |                     |   |  |  |
| Rated Voltage Range           | 6.3 to 35V   |                        |      |                          |      |    |  |                     |   |  |  |
| Rated Capacitance Range       | 1 to 100μF   |                        |      |                          |      |    |  |                     |   |  |  |
| Rated Capacitance Tolerance   | ±20% at 120Hz, 20°C  |                        |      |                          |      |    |  |                     |   |  |  |
| Leakage Current               | After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.  |                        |      |                          |      |    |  |                     |   |  |  |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz, Temperature : 20°C  |                        |      |                          |      |    |  |                     |   |  |  |
|                               | Rated voltage (  | , , , , , ,            | 10   |                          | 16   |    | 25   | 35                  |   |  |  |
|                               | tan δ (MAX.)   | 0.22                   | 0.20 |                          | 0.18 |    | 0.14   | 0.12                |   |  |  |
|                               | Measurement frequency : 120Hz  |                        |      |                          |      |    |  |                     |   |  |  |
| Stability at Law Tamparatura  | Rated voltage (V)  |                        |      |                          | 10   | 16 | 25   | 35                  |   |  |  |
| Stability at Low Temperature  | Impedance ratio  | Z-25°C / Z+20°C        | 2    |                          | 2    | 2  | 2  | 2                   |   |  |  |
|                               | ZT / Z20 (MAX.)  | Z-55°C /Z+20°C         | 4    |                          | 4    | 3  | 3  | 3                   |   |  |  |
| Endurance                     | The specifications li  | sted at right shall be | met  |                          |      | h  | - Mr   |                     |   |  |  |
|                               | when the capacitors are restored to 20°C after the rated voltage is applied for 1000   |                        |      | Capacitance change tan δ |      |    |  | l capacitance value | 1 |  |  |
|                               |  |                        |      |                          |      |    | 200% or less than the initial specified value  Less than or equal to the initial specified value |                     |   |  |  |
|                               | hours at 105°C.  Leakage current Less than or equal to the initial specified value   |                        |      |                          |      |    |  |                     |   |  |  |
| Shelf Life                    | After storig the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above. |                        |      |                          |      |    |  |                     |   |  |  |
| Marking                       | Printed with white color letter on dark brown sleeve.  |                        |      |                          |      |    |  |                     |   |  |  |

## ■Radial Lead Type





## Type numbering system (Example : 25V 10μF)



 Configuration
 Pb-free leadwire Pb-free PET sleeve

 4 to 6.3
 DD

## Dimensions

|          | V    |       | 6.3 |      |       | 10  |        |       | 16  |        |       | 25  |        |           | 35               |              |
|----------|------|-------|-----|------|-------|-----|--------|-------|-----|--------|-------|-----|--------|-----------|------------------|--------------|
| Cap.(μF) | Code |       | 0J  |      |       | 1A  |        |       | 1C  |        |       | 1E  |        |           | 1V               |              |
| 1        | 010  |       |     | <br> |       |     | l      |       |     | l      |       |     | l<br>I | 4×5       | 5.0              | 50           |
| 1.5      | 1R5  |       |     | <br> |       |     |        |       |     | l<br>I |       |     | <br>   | 4×5       | 5.0              | 50           |
| 2.2      | 2R2  |       |     | <br> |       |     | <br>   |       |     | l<br>I |       |     | <br>   | 4×5       | 5.0              | 50           |
| 3.3      | 3R3  |       |     | <br> |       |     |        |       |     | l      |       |     | I<br>I | 4×5       | 5.0              | 50           |
| 4.7      | 4R7  |       |     | <br> |       |     | <br>   |       |     |        | 4×5   | 5.0 | ¦ 50   | 4×5       | 5.0              | ¦ 50         |
| 6.8      | 6R8  |       |     | <br> |       |     | l<br>I |       |     | l      | 4×5   | 5.0 | ¦ 50   | 5×5       | 2.6              | ¦ 80         |
| 10       | 100  |       |     | <br> |       |     | <br>   | 4×5   | 5.0 | 50     | 5×5   | 2.6 | ¦ 80   | 5×5       | 2.6              | ¦ 80         |
| 15       | 150  |       |     | <br> |       |     | <br>   | 5×5   | 2.6 | ¦ 80   | 6.3×5 | 1.3 | ¦ 115  | 6.3×5     | 1.3              | ¦ 115        |
| 22       | 220  | 4×5   | 5.0 | 50   | 5×5   | 2.6 | 80     | 5×5   | 2.6 | ¦ 80   | 6.3×5 | 1.3 | ¦ 115  | 6.3×5     | 1.3              | ¦ 115        |
| 33       | 330  | 5×5   | 2.6 | 80   | 5×5   | 2.6 | 80     | 6.3×5 | 1.3 | 115    | 6.3×5 | 1.3 | ¦ 115  |           | l<br>I           | I<br>I       |
| 47       | 470  | 5×5   | 2.6 | 80   | 6.3×5 | 1.3 | 115    | 6.3×5 | 1.3 | 115    |       |     | I<br>I |           | l<br>I           | I<br>I       |
| 68       | 680  | 6.3×5 | 1.3 | 115  |       |     | l<br>I |       |     | l<br>I |       |     | I<br>I | Case size | I<br>I Impedance | Rated ripple |
| 100      | 101  | 6.3×5 | 1.3 | 115  |       |     | I<br>I |       |     |        |       |     | I<br>I | φD×L (mm) | I III POUGITOE   | ripple       |

Frequency coefficient of rated ripple current

| Frequency   | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|-------------|-------|--------|--------|-------|----------------|
| Coefficient | 0.35  | 0.50   | 0.64   | 0.83  | 1.00           |

Max. Impedance (Ω) at 20°C 100kHz Rated ripple current (mArms) at 105°C 100kHz

Please refer to page 20, 21, 22 about the formed or taped product spec. Please refer to page 4 for the minimum order quantity.