

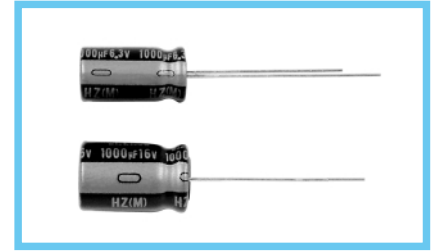
**HZ**

Ultra Low Impedance

series



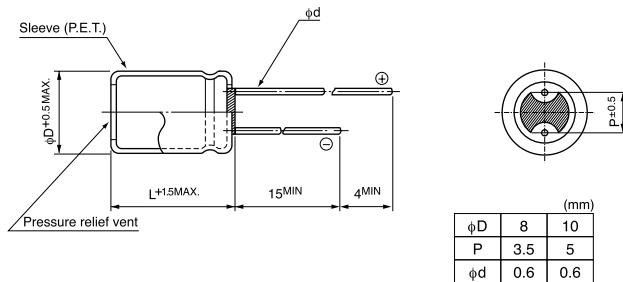
- Lower impedance than HN series.
- Adapted to the RoHS directive (2002/95/EC).



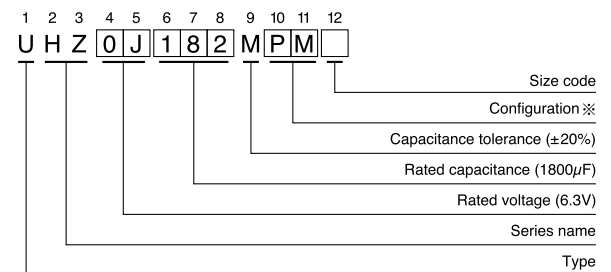
## Specifications

| Item                         | Performance Characteristics                                                                                                                                                                                             |                                         |      |      |            |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------|------|------------|
| Category Temperature         | -25 ~ +105°C                                                                                                                                                                                                            |                                         |      |      |            |
| Rated Voltage Range          | 6.3 ~ 16V                                                                                                                                                                                                               |                                         |      |      |            |
| Rated Capacitance Range      | 470 ~ 3300μF                                                                                                                                                                                                            |                                         |      |      |            |
| Capacitance Tolerance        | ±20% (120Hz, 20°C)                                                                                                                                                                                                      |                                         |      |      |            |
| Leakage Current              | After 2 minutes' application of rated voltage, leakage current is less than 0.03CV                                                                                                                                      |                                         |      |      |            |
| tan δ                        | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF                                                                                                                                              |                                         |      |      |            |
|                              | Rated voltage (V)                                                                                                                                                                                                       | 6.3                                     | 10   | 16   | 120Hz 20°C |
|                              | tan δ (MAX.)                                                                                                                                                                                                            | 0.22                                    | 0.19 | 0.16 |            |
| Stability at Low Temperature | Rated voltage (V)                                                                                                                                                                                                       | 6.3                                     | 10   | 16   | 120Hz      |
|                              | Impedance ratio ZT / Z20 (MAX.)                                                                                                                                                                                         | Z-25°C / Z+20°C                         | 3    | 3    |            |
| Endurance                    | After an application of D.C. bias voltage plus the rated ripple current for 2000 hours at 105°C the peak voltage shall not exceed the rated D.C. voltage, capacitors meet the characteristic requirements listed below. |                                         |      |      |            |
|                              | Capacitance change                                                                                                                                                                                                      | Within ±30% of initial value            |      |      |            |
|                              | tan δ                                                                                                                                                                                                                   | 200% or less of initial specified value |      |      |            |
|                              | Leakage current                                                                                                                                                                                                         | Initial specified value or less         |      |      |            |
| Marking                      | Printed with gold color on black sleeve.                                                                                                                                                                                |                                         |      |      |            |

## Radial Lead Type



## Type numbering system (Example : 6.3V 1800μF)



※ Configuration

| φ D    | Pb-free leadwire<br>Pb-free PET sleeve |
|--------|----------------------------------------|
| 8 · 10 | PM                                     |

## Standard ratings

| V (Code)  |      | 6.3 (0J)                    |                                         |                                           | 10 (1A)                     |                                         |                                           | 16 (1C)                     |                                         |                                           |
|-----------|------|-----------------------------|-----------------------------------------|-------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------------|
| Cap. (μF) | Item | Case size<br>φD × L<br>(mm) | Impedance<br>(mΩ) MAX.<br>20°C / 100kHz | Rated ripple<br>(mArms)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance<br>(mΩ) MAX.<br>20°C / 100kHz | Rated ripple<br>(mArms)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance<br>(mΩ) MAX.<br>20°C / 100kHz | Rated ripple<br>(mArms)<br>105°C / 100kHz |
| 470       | 471  |                             |                                         |                                           |                             |                                         |                                           | ▲ 10 × 12.5                 | 12                                      | 2280                                      |
| 680       | 681  |                             |                                         |                                           | ▲ 10 × 12.5                 | 12                                      | 2288                                      | ● 10 × 12.5                 | 12                                      | 2280                                      |
| 820       | 821  |                             |                                         |                                           | 10 × 12.5                   | 12                                      | 2280                                      | ○ 8 × 20                    | 9                                       | 2880                                      |
| 1000      | 102  | ▲ 10 × 12.5                 | 12                                      | 2280                                      | ● 10 × 16                   | 10                                      | 2960                                      | ○ 10 × 16                   | 10                                      | 2960                                      |
| 1200      | 122  | 8 × 15                      | 14                                      | 2210                                      | ○ 8 × 20                    | 9                                       | 2880                                      | ▲ 10 × 16                   | 10                                      | 2960                                      |
| 1500      | 152  | 10 × 12.5                   | 12                                      | 2280                                      | ● 10 × 16                   | 10                                      | 2960                                      | ● 10 × 20                   | 7                                       | 3770                                      |
| 1800      | 182  | 8 × 20                      | 9                                       | 2880                                      | 10 × 16                     | 10                                      | 2960                                      | 10 × 20                     | 7                                       | 3770                                      |
| 2200      | 222  | 10 × 16                     | 10                                      | 2960                                      | ▲ 8 × 20                    | 9                                       | 2880                                      | 10 × 20                     | 7                                       | 3770                                      |
| 2700      | 272  | 10 × 20                     | 7                                       | 3770                                      |                             |                                         |                                           |                             |                                         |                                           |
| 3300      | 332  | 10 × 25                     | 6.5                                     | 4690                                      |                             |                                         |                                           |                             |                                         |                                           |

Please refer to page 21, 22, 23 about the formed or taped product spec.  
Please refer to page 3 for the minimum order quantity.

- ▲ : In this case, [6] will be put at 12th digit of type numbering system.  
● : In this case, [9] will be put at 12th digit of type numbering system.  
○ : In this case, [9] will be put at 12th digit of type numbering system.