nichicon

# UAQ

Wide Temperature Range, Permissible Abnormal Voltage

- Improved safety feature for abnormally excessive voltage.
- High ripple current product.
- Compliant to the RoHS directive (2011/65/EU).

UAQ
Smaller
UAS

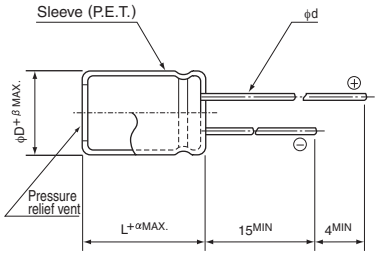
## ■Specifications

| Item | Performance Characteristics |
|---|---|
| Category Temperature Range | −40 to +105°C |
| Rated Voltage Range | 200 · 400V |
| Rated Capacitance Range | 10 to 220μF |
| Capacitance Tolerance | ±20% at 120Hz, 20°C |
| Leakage Current | After 1 minute's application of rated voltage at 20°C, leakage current is 0.04CV+100 (μA) or less. |
| Tangent of loss angle (tan δ) | Rated voltage (V): 200 / 400; tan δ (MAX.): 0.15 / 0.15. Measurement frequency:120Hz at 20°C |
| Stability at Low Temperature | Rated voltage (V): 200 / 400. Impedance ratio ZT / Z20 (MAX.): Z−25°C / Z+20°C: 3 / 8; Z−40°C / Z+20°C: 6 / 10. Measurement frequency : 120Hz |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 2000 hours at 105°C, the peak voltage shall not exceed the rated voltage. Capacitance change: Within ±20% of the initial capacitance value; tan δ: 200% or less than the initial specified value; Leakage current: Less than or equal to the initial specified value |
| Shelf Life | After storing 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. |
| Safety Performance | The pressure relief vent will operate in normal conditions, with no dangerous conditons such as flames, ignitions or dispersion of pieces of the capacitor and / or case. |

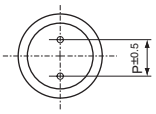
| Safety Performance: voltage (V) | Test conditions: Limited DC current | Test conditions: Test Voltage |
|---|---|---|
| 200 | 4A | 300VDC and 375VDC |
| 400 | 2A | 500VDC and 600VDC |

| Marking | Printed with white color letter on dark brown sleeve. |
|---|---|

## ■Radial Lead Type




• Please refer to page 20 about the end seal configuration.




(mm)

| φD | 10 | 12.5 | 16 | 18 | 22 |
|---|---|---|---|---|---|
| β | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 |
| P | 5.0 | 5.0 | 7.5 | 7.5 | 10 |
| φd | 0.6 | 0.6※ | 0.8 | 0.8 | 1.0 |

※In case L>25 for φ12.5 (D) case sizes, lead diameter φ0.8 (d) will be applied.

| α | (φD≦18) 2.0 |
|---|---|
| | (φD >18) 3.0 |

Type numbering system (Example : 200V 100μF)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U | A | Q | 2 | D | 1 | 0 | 1 | M | H | D | |

Size code
Configuration※
Capacitance tolerance (±20%)
Rated capacitance (100μF)
Rated voltage (200V)
Series name
Type

※Configuration

| φ D | Pb-free leadwire Pb-free PET sleeve |
|---|---|
| 10 | PD |
| 12.5 to 18 | HD |
| 22 | RD |

## ■Dimensions

| Cap.(μF) \ V(Code) / Code \ φD | 200 (2D) φ10 | φ12.5 | φ16 | φ18 | φ22 | 400 (2G) φ12.5 | φ16 | φ18 | φ22 |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 100 | | | | | | 12.5 × 20<br>100 | | | |
| 22 | 220 | 10 × 20<br>120 | | | | | 12.5 × 31.5<br>145 | ○16 × 20<br>145 | | |
| 33 | 330 | 10 × 25<br>160 | ○12.5 × 20<br>160 | | | | 12.5 × 40<br>195 | ○16 × 25<br>195 | ※ 18 × 20<br>195 | |
| 47 | 470 | 10 × 31.5<br>195 | ○12.5 × 20<br>195 | | | | | 16 × 35.5<br>280 | ○18 × 25<br>280 | ※22 × 20<br>280 |
| 56 | 560 | | 12.5 × 25<br>210 | | | | | 16 × 35.5<br>320 | ○18 × 31.5<br>320 | ※22 × 25<br>320 |
| 68 | 680 | | 12.5 × 25<br>250 | | | | | 16 × 40<br>350 | ○18 × 35.5<br>350 | |
| 82 | 820 | | 12.5 × 31.5<br>285 | ○16 × 20<br>285 | | | | | 18 × 40<br>420 | |
| 100 | 101 | | 12.5 × 35.5<br>335 | ○16 × 25<br>335 | ※ 18 × 20<br>335 | | | | | |
| 150 | 151 | | | 16 × 31.5<br>435 | ○18 × 25<br>435 | ※22 × 20<br>435 | | | | |
| 180 | 181 | | | 16 × 35.5<br>495 | ○18 × 31.5<br>495 | ※22 × 25<br>495 | | | | |
| 220 | 221 | | | | 18 × 35.5<br>575 | | | | | Case size φD×L (mm)<br>Rated ripple |

Rated ripple current (mArms) at 105°C 120Hz

○ : In case of low profile type, 6 will be put at 12th digit of type numbering system.
※ : For further low profile product, 3 will be put at 12th digit.

## ● Frequency coefficient of rated ripple current

| Frequency | 50, 60Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
|---|---|---|---|---|---|
| Coefficient | 0.80 | 1.00 | 1.25 | 1.40 | 1.60 |

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