

UE series

Chip Type, Vibration Resistance



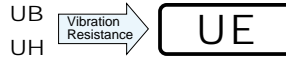
For SMD



Long Life

Anti-Solvent
Feature

- Chip type with load life of 2000 to 5000 hours at 125°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Adapted to the RoHS directive (2002/95/EC).

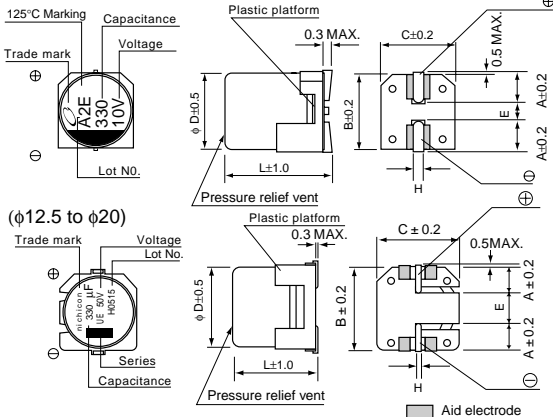


Specifications

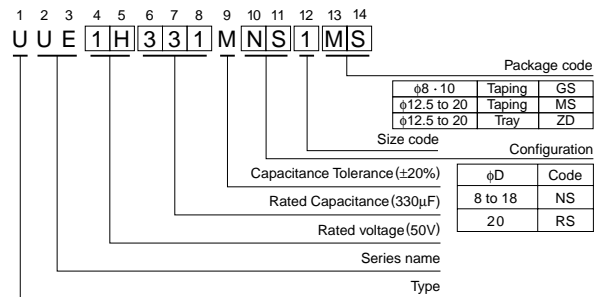
| Item | Performance Characteristics | | | | | | | |
|----------------------------------|---|--------------|------|------|--------------------|---|------|-------|
| Category Temperature Range | -55 to +125°C (φ12.5 to 20) -40 to +125°C (φ8, φ10) | | | | | | | |
| Rated Voltage Range | 10 to 50V | | | | | | | |
| Rated Capacitance Range | 33 to 4700μF | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | |
| Leakage Current | After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater. | | | | | | | |
| Tangent of loss angle (tan δ) | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. | | | | | | | |
| | Rated voltage (V) | | 10 | 16 | 25 | 35 | 50 | 120Hz |
| | tan δ (MAX) | φ8・φ10 | 0.26 | 0.20 | 0.16 | 0.14 | 0.14 | 20°C |
| | | φ12.5 to φ20 | 0.22 | 0.18 | 0.16 | 0.14 | 0.12 | |
| Stability at Low Temperature | Rated voltage (V) | | 10 | 16 | 25 | 35 | 50 | 120Hz |
| | Impedance ratio Z-40°C / Z+20°C (MAX) | φ8・φ10 | 10 | 8 | 6 | 4 | 4 | |
| | | φ12.5 to φ20 | 8 | 6 | 4 | 3 | 3 | |
| | | | | | | | | |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD=8 and 10) at 125°C. | | | | Capacitance change | Within ±30% of initial value | | |
| | | | | | tan δ | 300% or less of initial specified value | | |
| | | | | | Leakage current | Less than or equal to the initial specified value | | |
| Shelf Life | After storing the capacitors under no load at 125°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above. | | | | | | | |
| Marking | Black print on the case top. | | | | | | | |

Chip Type

(φ8 to φ10)



Type numbering system (Example : 50V 330μF)



| φD | 8 | 10 | 12.5 | 16 | 18 | 20 |
|----|------------|------------|------------|------------|------------|------------|
| A | 2.9 | 3.2 | 4.8 | 5.4 | 6.4 | 6.2 |
| B | 8.3 | 10.3 | 13.6 | 17.1 | 19.1 | 21.1 |
| C | 8.3 | 10.3 | 13.6 | 17.1 | 19.1 | 21.1 |
| E | 3.1 | 4.5 | 4.0 | 6.3 | 6.3 | 8.8 |
| H | 1.1 to 1.5 | 1.1 to 1.5 | 1.0 to 1.4 | 1.0 to 1.4 | 1.0 to 1.4 | 1.3 to 1.7 |

Dimensions

| V | | 10 | | 16 | | 25 | | 35 | | 50 | |
|----------|-----|-----------|------|-----------|------|-----------|------|-----------|------|--------------------------|--------------|
| Cap.(μF) | | 1A | | 1C | | 1E | | 1V | | 1H | |
| 33 | 330 | | | | | | | | | 8×10 | 90 |
| 47 | 470 | | | | | | | | | 10×10 | 130 |
| 100 | 101 | | | 8×10 | 140 | 8×10 | 140 | 10×10 | 150 | 12.5×13.5 | 500 |
| 220 | 221 | 8×10 | 140 | 10×10 | 190 | 10×10 | 190 | 12.5×13.5 | 550 | 16×16.5 | 850 |
| 330 | 331 | 10×10 | 190 | 12.5×13.5 | 750 | 12.5×13.5 | 750 | 16×16.5 | 1000 | 16×16.5 | 850 |
| 470 | 471 | 12.5×13.5 | 750 | 12.5×13.5 | 750 | 16×16.5 | 1000 | 16×16.5 | 1000 | 18×16.5 | 950 |
| 680 | 681 | 12.5×16 | 900 | 16×16.5 | 1000 | 18×16.5 | 1200 | 18×16.5 | 1200 | | |
| 1000 | 102 | 12.5×16 | 900 | 18×16.5 | 1200 | 18×21.5 | 1550 | 20×21.5 | 1400 | | |
| 2200 | 222 | 18×16.5 | 1200 | 18×16.5 | 1200 | | | | | | |
| 3300 | 332 | 18×16.5 | 1200 | | | | | | | | |
| 4700 | 472 | 18×21.5 | 1550 | | | | | | | | |
| | | | | | | | | | | Case size φD × L (mm) | Rated ripple |

※ In this case, [6] will be put at 12th digit of type numbering system, "▲"

Rated Ripple (mArms) at 125°C 100kHz

Frequency coefficient of rated ripple current

| φD | Frequency Cap.(μF) | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|--------------|-----------------------|-------|--------|--------|-------|----------------|
| φ8 · φ10 | 33 to 330 | 0.47 | 0.67 | 0.78 | 0.91 | 1.00 |
| φ12.5 to φ20 | 100 to 680 | 0.53 | 0.67 | 0.82 | 0.89 | 1.00 |
| | 1000 to 4700 | 0.74 | 0.87 | 0.96 | 0.98 | 1.00 |

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.