



**THE DATASHEET OF
UUE1E331MNS1MS**

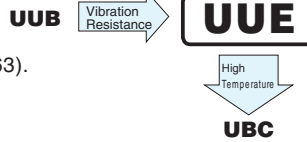


UUE

Chip Type, Vibration Resistance



- Chip type with load life of 2000 to 5000 hours at 125°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



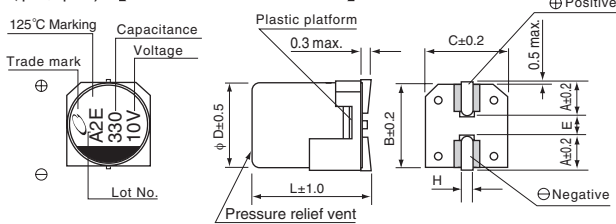
Valued marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.

Specifications

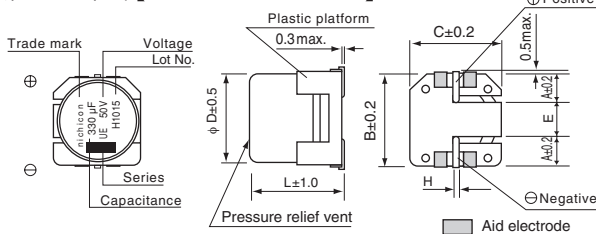
| Item | Performance Characteristics | | | | | | |
|-------------------------------|---|--------------------|---|------|------|------|-------|
| Category Temperature Range | -40 to +125°C (φ8, φ10), -55 to +125°C (φ12.5 to 18) | | | | | | |
| Rated Voltage Range | 10 to 50V | | | | | | |
| Rated Capacitance Range | 33 to 4700μF | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | |
| Leakage Current ※ | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18) | | | | | | |
| Tangent of loss angle (tan δ) | Rated voltage (V) | 10 | 16 | 25 | 35 | 50 | 120Hz |
| | tan δ (max.) | φ8, φ10 | 0.26 | 0.20 | 0.16 | 0.14 | 0.14 |
| 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 |
| 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 the initial capacitance value | | | | |
| | | tan δ | 300% or less than the initial specified value | | | | |
| Shelf Life | After storing the capacitors under no load at 125°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. | Leakage current | Less than or equal to the initial specified value | | | | |
| | | | | | | | |
| Marking | Black print on the case top. | | | | | | |

Chip Type

(φ8, φ10) 【Vibration Resistance】

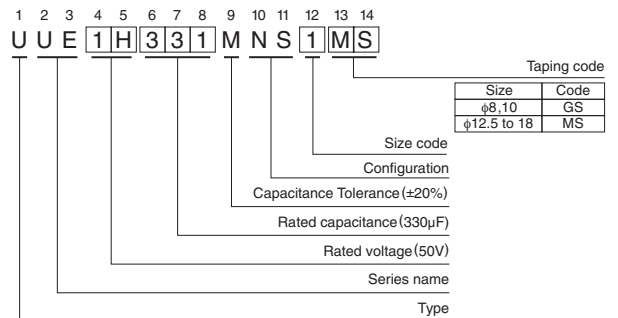


(φ12.5 to φ18) 【Vibration Resistance】



※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

Type numbering system (Example : 50V 330μF)



| φD | 8 | 10 | 12.5 | 16 | 18 |
|----|------------|------------|------------|------------|------------|
| A | 2.9 | 3.2 | 4.8 | 5.4 | 6.4 |
| B | 8.3 | 10.3 | 13.6 | 17.1 | 19.1 |
| C | 8.3 | 10.3 | 13.6 | 17.1 | 19.1 |
| E | 3.1 | 4.5 | (4.0) | (6.3) | (6.3) |
| L | 10 | 10 | 13.5,16 | 16.5,21.5 | 16.5,21.5 |
| 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 |

Frequency coefficient of rated ripple current

| φD | Cap.(μF) | Frequency | 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 |
| | | | 0.53 | 0.67 | 0.82 | 0.89 | 1.00 |
| φ12.5 to φ18 | 100 to 680 | | 0.74 | 0.87 | 0.96 | 0.98 | 1.00 |
| | | | | | | | |

● Dimension table in next page.

UUE



■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size $\phi\text{D}\times\text{L}$ (mm) | $\tan \delta$ | Leakage Current (μA) (at 20°C after 1 minute) | Rated Ripple (mArms) (125°C/100kHz) | Part Number |
|--------------------------------|--|--|---------------|---|---|-----------------|
| 10 (1A) | 220 | 8×10 | 0.26 | 66 | 140 | ※UUE1A221MNS1GS |
| | 330 | 10×10 | 0.26 | 99 | 190 | ※UUE1A331MNS1GS |
| | 470 | 12.5×13.5 | 0.22 | 141 | 750 | ※UUE1A471MNS1MS |
| | 680 | 12.5×16 | 0.22 | 204 | 900 | ※UUE1A681MNS1MS |
| | 1000 | 12.5×16 | 0.22 | 300 | 900 | ※UUE1A102MNS1MS |
| | 2200 | 18×16.5 | 0.24 | 660 | 1200 | ※UUE1A222MNS1MS |
| | 2200 | 16×21.5 | 0.24 | 660 | 1200 | ※UUE1A222MNS6MS |
| | 3300 | 18×16.5 | 0.26 | 990 | 1200 | ※UUE1A332MNS1MS |
| 4700 | 18×21.5 | 0.28 | 1410 | 1550 | ※UUE1A472MNS1MS | |
| 16 (1C) | 100 | 8×10 | 0.20 | 48 | 140 | ※UUE1C101MNS1GS |
| | 220 | 10×10 | 0.20 | 105.6 | 190 | ※UUE1C221MNS1GS |
| | 330 | 12.5×13.5 | 0.18 | 158.4 | 750 | UUE1C331MNS1MS |
| | 470 | 12.5×13.5 | 0.18 | 225.6 | 750 | UUE1C471MNS1MS |
| | 680 | 16×16.5 | 0.18 | 326.4 | 1000 | UUE1C681MNS1MS |
| | 1000 | 18×16.5 | 0.18 | 480 | 1200 | UUE1C102MNS1MS |
| | 2200 | 18×16.5 | 0.20 | 1056 | 1200 | UUE1C222MNS1MS |
| 25 (1E) | 100 | 8×10 | 0.16 | 75 | 140 | ※UUE1E101MNS1GS |
| | 220 | 10×10 | 0.16 | 165 | 190 | ※UUE1E221MNS1GS |
| | 330 | 12.5×13.5 | 0.16 | 247.5 | 750 | UUE1E331MNS1MS |
| | 470 | 16×16.5 | 0.16 | 352.5 | 1000 | UUE1E471MNS1MS |
| | 680 | 18×16.5 | 0.16 | 510 | 1200 | UUE1E681MNS1MS |
| | 680 | 16×21.5 | 0.16 | 510 | 1200 | UUE1E681MNS6MS |
| | 1000 | 18×21.5 | 0.16 | 750 | 1550 | UUE1E102MNS1MS |
| 35 (1V) | 47 | 8×10 | 0.14 | 49.35 | 100 | ※UUE1V470MNS1GS |
| | 100 | 10×10 | 0.14 | 105 | 150 | ※UUE1V101MNS1GS |
| | 220 | 12.5×13.5 | 0.14 | 231 | 550 | UUE1V221MNS1MS |
| | 330 | 16×16.5 | 0.14 | 346.5 | 1000 | UUE1V331MNS1MS |
| | 470 | 16×16.5 | 0.14 | 493.5 | 1000 | UUE1V471MNS1MS |
| | 680 | 18×16.5 | 0.14 | 714 | 1200 | UUE1V681MNS1MS |
| | 1000 | 18×21.5 | 0.14 | 1050 | 1400 | UUE1V102MNS6MS |
| 50 (1H) | 33 | 8×10 | 0.14 | 49.5 | 90 | ※UUE1H330MNS1GS |
| | 47 | 10×10 | 0.14 | 70.5 | 130 | ※UUE1H470MNS1GS |
| | 100 | 12.5×13.5 | 0.12 | 150 | 500 | UUE1H101MNS1MS |
| | 220 | 16×16.5 | 0.12 | 330 | 850 | UUE1H221MNS1MS |
| | 330 | 16×16.5 | 0.12 | 495 | 850 | UUE1H331MNS1MS |
| | 470 | 18×16.5 | 0.12 | 705 | 950 | UUE1H471MNS1MS |




• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

Looking for pricing, stock, or lifecycle information?

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