



**THE DATASHEET OF
ULH2C180MNL1GS**



ALUMINUM ELECTROLYTIC CAPACITORS

ULH

Chip Type, High Voltage.
High Reliability.



- Chip type, High voltage and High Reliability.
- Load life of 4000 hours at +125°C.
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

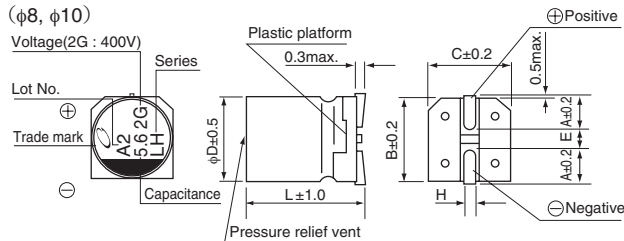


Specifications

| Item | Performance Characteristics | | | | | |
|-------------------------------|---|---|------|------|------|------|
| Category Temperature Range | -40 to +125°C | | | | | |
| Rated Voltage Range | 160 to 450V | | | | | |
| Rated Capacitance Range | 2.2 to 27μF | | | | | |
| 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 0.04CV+100 (μA). | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz at 20°C | | | | | |
| | Rated voltage (V) | 160 | 200 | 250 | 400 | 450 |
| | tan δ (max.) | 0.20 | 0.20 | 0.25 | 0.25 | 0.30 |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | |
| | Rated voltage (V) | 160 | 200 | 250 | 400 | 450 |
| | Impedance ratio Z(-40°C) / Z(+20°C) | 6 | 6 | 10 | 10 | 15 |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 4000 hours at 125°C. | | | | | |
| | Capacitance change | Within ±30% of the initial capacitance value | | | | |
| | tan δ | 300% 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 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. | | | | | |
| Resistance to soldering heat | The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate. | | | | | |
| | Capacitance change | Within ±10% of the initial capacitance value | | | | |
| | tan δ | Less than or equal to the initial specified value | | | | |
| | Leakage current | Less than or equal to the initial specified value | | | | |
| Marking | Black print on the case top. | | | | | |

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

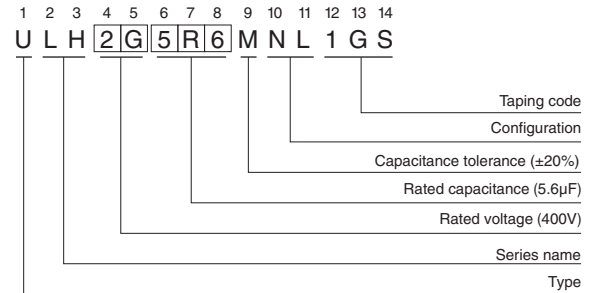
Chip Type



| φD×L | 8×10 | 10×10 | 10×13.5 |
|------|------------|------------|------------|
| A | 2.9 | 3.2 | 3.2 |
| B | 8.3 | 10.3 | 10.3 |
| C | 8.3 | 10.3 | 10.3 |
| E | 3.1 | 4.5 | 4.5 |
| L | 10 | 10 | 13.5 |
| H | 0.8 to 1.1 | 0.8 to 1.1 | 0.8 to 1.1 |

| Voltage | 160 | 200 | 250 | 400 | 450 |
|---------|-----|-----|-----|-----|-----|
| Code | 2C | 2D | 2E | 2G | 2W |

Type numbering system (Example : 400V 5.6μF)



Frequency coefficient of rated ripple current

| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|-------------|-------|--------|--------|-------|----------------|
| Coefficient | 0.70 | 1.00 | 1.17 | 1.36 | 1.50 |

● Dimension table in next page.

ULH

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D \times L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 1 minute) | Rated Ripple (mArms) (125°C/120Hz) | Part Number |
|--------------------------------|------------------------------------|---------------------------------------|--------------|--|--|----------------|
| 160 (2C) | 12 | 8 \times 10 | 0.20 | 176.8 | 45 | ULH2C120MNL1GS |
| | 18 | 10 \times 10 | 0.20 | 215.2 | 60 | ULH2C180MNL1GS |
| | 27 | 10 \times 13.5 | 0.20 | 272.8 | 65 | ULH2C270MNL1GS |
| 200 (2D) | 10 | 8 \times 10 | 0.20 | 180 | 45 | ULH2D100MNL1GS |
| | 15 | 10 \times 10 | 0.20 | 220 | 60 | ULH2D150MNL1GS |
| | 22 | 10 \times 13.5 | 0.20 | 276 | 65 | ULH2D220MNL1GS |
| 250 (2E) | 7.5 | 8 \times 10 | 0.25 | 175 | 30 | ULH2E7R5MNL1GS |
| | 12 | 10 \times 10 | 0.25 | 220 | 45 | ULH2E120MNL1GS |
| | 15 | 10 \times 13.5 | 0.25 | 250 | 50 | ULH2E150MNL1GS |
| 400 (2G) | 3.3 | 8 \times 10 | 0.25 | 152.8 | 30 | ULH2G3R3MNL1GS |
| | 5.6 | 10 \times 10 | 0.25 | 189.6 | 45 | ULH2G5R6MNL1GS |
| | 7.5 | 10 \times 13.5 | 0.25 | 220 | 50 | ULH2G7R5MNL1GS |
| 450 (2W) | 2.2 | 8 \times 10 | 0.30 | 139.6 | 20 | ULH2W2R2MNL1GS |
| | 3.9 | 10 \times 10 | 0.30 | 170.2 | 35 | ULH2W3R9MNL1GS |
| | 5.6 | 10 \times 13.5 | 0.30 | 200.8 | 40 | ULH2W5R6MNL1GS |

- 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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