## SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS



Chip type, High Reliability Series





- · Chip type, high temperature range, for 125°C use
- · Lower ESR than UR series
- · Application to automotive system
- · Complied to the RoHS directive





| Item   | Characteristics  |                                   |  |  |
|--|--|-----------------------------------|--|--|
| Operating temperature range                                | -40 ~ +125°C   |                                   |  |  |
| Leakage current max.                                       | I = 0.01CV or 3μA whichever is greater (after 2 minutes)   |                                   |  |  |
| Capacitance tolerance                                      | ±20% at 120Hz, 20°C  |                                   |  |  |
| Dissipation factor max.                                    | WV   | 35                                |  |  |
| (at 120Hz, 20°C)   | tan∂   | 0.16                              |  |  |
| Low temperature characteristics                            | WV   | 35                                |  |  |
| Low temperature characteristics (Impedance ratio at 120Hz) | Z-25°C/Z+20°C  | 2                                 |  |  |
| (impedance ratio at 120112)                                | Z-40°C/Z+20°C 3  |                                   |  |  |
| Load life  | Leakage current  | Less than specified value         |  |  |
| (after application of the rated                            | Capacitance change   | Within ±30% of initial value      |  |  |
| voltage for 2000 hours at 125°C)                           | tanδ   | Less than 300% of specified value |  |  |
| Shelf life (at 125°C)                                      | After 1000 hours no load test, leakage current, capacitance and tan∂ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4 |                                   |  |  |
|  | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds.                                  |                                   |  |  |
| Resistance to soldering heat                               | Leakage current  | Less than specified value         |  |  |
|  | Capacitance change   | Within ±10% of initial value      |  |  |
|  | tan∂   | Less than specified value         |  |  |

## DRAWING (See page 62)

-Series code of UN is "UN"

Unit: mm

| ØD×L    | Α   | В    | С    | Е   | R       |
|---------|-----|------|------|-----|---------|
| 6.3×7.7 | 2.4 | 6.6  | 6.6  | 2.2 | 0.5~0.8 |
| 8×10    | 2.9 | 8.3  | 8.3  | 3.1 | 0.8~1.1 |
| 10×10   | 3.2 | 10.3 | 10.3 | 4.5 | 0.8~1.1 |

## DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| WV   | 33        |             |                         |              |  |
|------|-----------|-------------|-------------------------|--------------|--|
| Item | ØD×L(mm)  | ESR (S      | Ripple current (mA rms) |              |  |
| μF   |           | 20°C 100kHz | -40°C 100kHz            | 125°C 100kHz |  |
| 47   | 6.3 × 7.7 | 0.30        | 3.0                     | 200          |  |
| 100  | 6.3 × 7.7 | 0.27        | 2.7                     | 240          |  |
| 220  | 8 × 10    | 0.20        | 2.0                     | 270          |  |
| 330  | 10 × 10   | 0.15        | 1.5                     | 500          |  |

## FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

| Frequency   | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz≦ |
|-------------|------|-------|-------|------|--------|
| Coefficient | 0.35 | 0.5   | 0.64  | 0.83 | 1.00   |