

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

## SC Chip type, For Surface Mounting Series

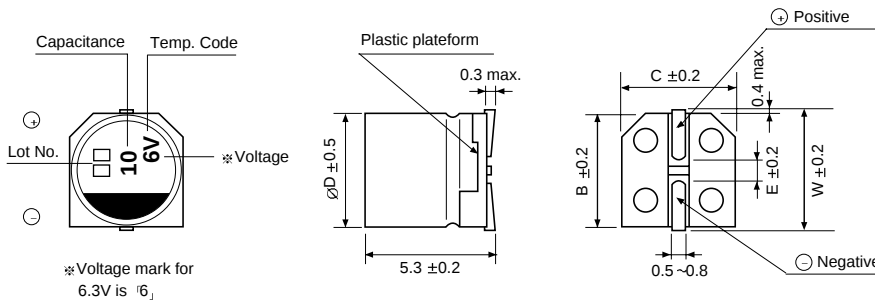
- Chip type with 5.5mm height
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape



| Item                                                                          | Characteristics                                                                                                                         |            |            |                                   |            |            |            |            |    |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------------------------|------------|------------|------------|------------|----|
| Operating temperature range                                                   | -40 ~ +85 °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.<br>(at 120Hz, 20 °C)                                  | WV                                                                                                                                      | 4          | 6.3        | 10                                | 16         | 25         | 35         | 50         |    |
|                                                                               | tanδ                                                                                                                                    | 0.35(0.40) | 0.24(0.30) | 0.20                              | 0.16(0.19) | 0.13(0.16) | 0.12(0.14) | 0.09(0.14) |    |
|                                                                               | Figures in (    ) are for φ3 products.                                                                                                  |            |            |                                   |            |            |            |            |    |
| Low temperature characteristics<br>(Impedance ratio at 120Hz)                 | WV                                                                                                                                      |            | 4          | 6.3                               | 10         | 16         | 25         | 35         | 50 |
|                                                                               | Z-25 °C/Z+20 °C                                                                                                                         |            | 6          | 4                                 | 3          | 2          | 2          | 2          | 2  |
|                                                                               | Z-40 °C/Z+20 °C                                                                                                                         |            | 12         | 8                                 | 6          | 4          | 4          | 4          | 4  |
| Load life<br>(after application of the rated voltage for 2000 hours at 85 °C) | Leakage current                                                                                                                         |            |            | Less than specified value         |            |            |            |            |    |
|                                                                               | Capacitance change                                                                                                                      |            |            | Within ±20% of initial value      |            |            |            |            |    |
|                                                                               | tanδ                                                                                                                                    |            |            | Less than 200% of specified value |            |            |            |            |    |
| Shelf life (at 85 °C)                                                         | After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value.                                       |            |            |                                   |            |            |            |            |    |
| Resistance to soldering heat                                                  | The following specifications shall be satisfied when the capacitors are restored to 20 °C after exposing them at 250 °C for 30 seconds. |            |            |                                   |            |            |            |            |    |
|                                                                               | Leakage current                                                                                                                         |            |            | Less than specified value         |            |            |            |            |    |
|                                                                               | Capacitance change                                                                                                                      |            |            | Within ±10% of initial value      |            |            |            |            |    |
|                                                                               | tanδ                                                                                                                                    |            |            | Less than specified value         |            |            |            |            |    |

## DRAWING

Unit : mm



| $\phi D$ | W   | B   | C   | E   |
|----------|-----|-----|-----|-----|
| 3        | 3.9 | 3.3 | 3.3 | 0.8 |
| 4        | 5.0 | 4.3 | 4.3 | 1.0 |
| 5        | 6.0 | 5.3 | 5.3 | 1.4 |
| 6.3      | 7.3 | 6.6 | 6.6 | 2.2 |

## DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| $\mu F$ | WV   | 4      | 6.3  | 10     | 16          | 25          | 35          | 50             |
|---------|------|--------|------|--------|-------------|-------------|-------------|----------------|
| 0.1     |      |        |      |        |             |             |             | 4(3) 3.2(2.4)  |
| 0.22    |      |        |      |        |             |             |             | 4(3) 4.7(3.5)  |
| 0.33    |      |        |      |        |             |             |             | 4(3) 5.7(4.3)  |
| 0.47    |      |        |      |        |             |             |             | 4(3) 6.8(5.2)  |
| 1.0     |      |        |      |        |             |             |             | 4(3) 10.0(7.5) |
| 2.2     |      |        |      |        |             |             | 4(3) 11(10) | 4 14.8         |
| 3.3     |      |        |      |        |             | 4(3) 15(12) | 4 16        | 4 18.1         |
| 4.7     |      |        |      |        | 4(3) 16(13) | 4 18        | 4 19        | 5 25.0         |
| 10      | 4(3) | 16(13) | 4(3) | 19(16) | 4 21        | 4 24        | 5 30        | 5 32 6.3 42.6  |
| 22      | 4(3) | 24(19) | 4    | 29     | 5 36        | 5 41        | 6.3 53      | 6.3 55         |
| 33      | 4    | 29     | 5    | 41     | 5 44        | 6.3 58      | 6.3 64      |                |
| 47      | 4    | 35     | 5    | 48     | 6.3 62      | 6.3 69      |             |                |
| 100     | 6.3  | 68     | 6.3  | 82     |             |             |             |                |
| 150     | 6.3  | 84     |      |        |             |             |             |                |

Ripple current (mA rms) at 85 °C, 120Hz  
Case size  $\phi D$  (mm)