

## NC Chip type, Non-polarized Series

- Chip type with 5.5mmL height
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Complied to the RoHS directive
- AEC-Q200 compliant : Please contact us for more details.

NP Non-polarized S Solvent Proof

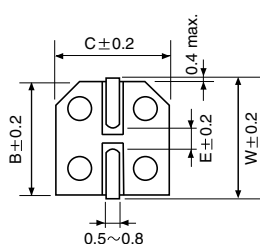
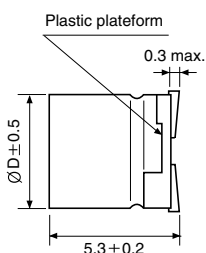
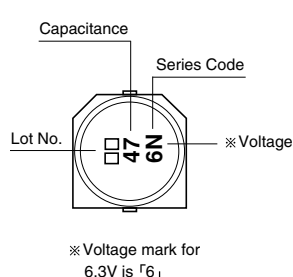


| Item                                                                         | Characteristics                                                                                                                                                                |      |      |                                   |      |      |      |    |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----------------------------------|------|------|------|----|
| Operating temperature range                                                  | -40 ~ +85°C                                                                                                                                                                    |      |      |                                   |      |      |      |    |
| Leakage current max.                                                         | I = 0.05CV or 10 $\mu$ A whichever is greater (after 2 minutes)                                                                                                                |      |      |                                   |      |      |      |    |
| Capacitance tolerance                                                        | $\pm$ 20% at 120Hz, 20°C                                                                                                                                                       |      |      |                                   |      |      |      |    |
| Dissipation factor max.<br>(at 120Hz, 20°C)                                  | WV                                                                                                                                                                             | 6.3  | 10   | 16                                | 25   | 35   | 50   |    |
|                                                                              | tan $\delta$                                                                                                                                                                   | 0.24 | 0.20 | 0.17                              | 0.17 | 0.15 | 0.15 |    |
| Low temperature characteristics<br>(Impedance ratio at 120Hz)                | WV                                                                                                                                                                             |      | 6.3  | 10                                | 16   | 25   | 35   | 50 |
|                                                                              | Z-25°C/Z+20°C                                                                                                                                                                  |      | 4    | 3                                 | 2    | 2    | 2    | 2  |
|                                                                              | Z-40°C/Z+20°C                                                                                                                                                                  |      | 8    | 6                                 | 4    | 4    | 3    | 3  |
| Load life<br>(after application of the rated voltage for 2000 hours at 85°C) | Leakage current                                                                                                                                                                |      |      | Less than specified value         |      |      |      |    |
|                                                                              | Capacitance change                                                                                                                                                             |      |      | Within $\pm$ 20% of initial value |      |      |      |    |
|                                                                              | tan $\delta$                                                                                                                                                                   |      |      | Less than 200% of specified value |      |      |      |    |
|                                                                              | Test method                                                                                                                                                                    |      |      | Polarity reverse each 250 hours   |      |      |      |    |
| Shelf life (at 85°C)                                                         | After 1000 hours no load test, leakage current, capacitance and tan $\delta$ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4 |      |      |                                   |      |      |      |    |
| 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 10 seconds.                                          |      |      |                                   |      |      |      |    |
|                                                                              | Leakage current                                                                                                                                                                |      |      | Less than specified value         |      |      |      |    |
|                                                                              | Capacitance change                                                                                                                                                             |      |      | Within $\pm$ 10% of initial value |      |      |      |    |
|                                                                              | tan $\delta$                                                                                                                                                                   |      |      | Less than specified value         |      |      |      |    |

### DRAWING

Unit : mm

-Series code of NC is "N"



| ØD  | W   | B   | C   | E   |
|-----|-----|-----|-----|-----|
| 4   | 4.8 | 4.3 | 4.3 | 1.0 |
| 5   | 5.8 | 5.3 | 5.3 | 1.4 |
| 6.3 | 7.1 | 6.6 | 6.6 | 2.2 |

### DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| $\mu$ F | WV         | 6.3        | 10         | 16       | 25         | 35         | 50         |
|---------|------------|------------|------------|----------|------------|------------|------------|
| 1.0     |            |            |            |          |            |            | 4×5.3 8.4  |
| 2.2     |            |            |            |          |            | 4×5.3 8.4  | 5×5.3 13   |
| 3.3     |            |            |            |          | 5×5.3 12   | 5×5.3 16   | 5×5.3 17   |
| 4.7     |            |            |            | 4×5.3 12 | 5×5.3 16   | 5×5.3 18   | 6.3×5.3 20 |
| 10      |            |            | 4×5.3 17   | 5×5.3 23 | 6.3×5.3 27 | 6.3×5.3 29 |            |
| 22      | 5×5.3 28   | 6.3×5.3 33 | 6.3×5.3 37 |          |            |            |            |
| 33      | 6.3×5.3 37 | 6.3×5.3 41 | 6.3×5.3 49 |          |            |            |            |
| 47      | 6.3×5.3 45 |            |            |          |            |            |            |

Ripple current (mA rms) at 85°C, 120Hz  
Case size ØD x L (mm)