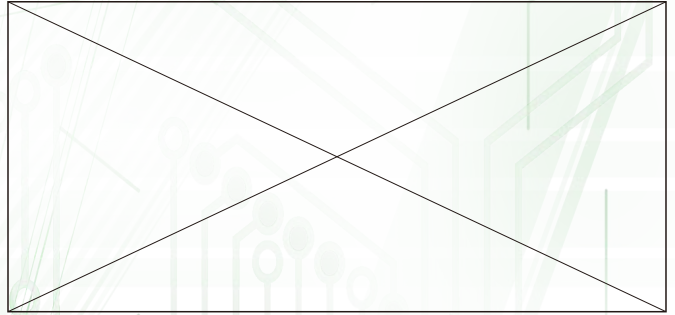


NM Series

- Non-polarized series with 7mm height
- Designed for use in circuits with reversing polarity
- Load life of 1000 hours at 105
- Solvent-proof
- Rohs compliance.

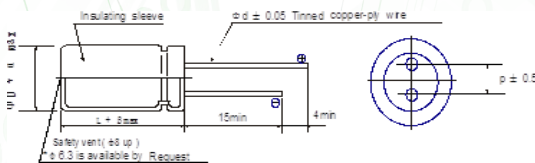


SPECIFICATIONS

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--------|------|------|------|------|------|------|----|-----|---------------------|------|------|------|------|------|------|------|------|---------------------|---|---|---|---|---|---|---|---|
| Operating Temperature Range | - 40 ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage Range | 6.3 ~63 V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Cap. Range | 0.1 ~220 μF | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | - 20% ~ + 20% (at 20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | I = 0.03CV or 3(μA) whichever is greater.(after 5 min.) where, I: Max Leakage Current(μA), C: Nominal Capacitance(μF), V: Rated Voltage(V) (at 20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (tanδ) (at 120Hz, +20°C) | <table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>tanδ</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.10</td> </tr> </table> | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | tanδ | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | 0.10 | | | | | | | | | |
| WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | | |
| tanδ | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | 0.10 | | | | | | | | | | | | | | | | | | | | |
| Low Temp. Impedance Stability at 120Hz | <table border="1"> <tr> <td>W. V .</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z(-25°C) / Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(+20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table> | W. V . | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | Z(-25°C) / Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | Z(-40°C) / Z(+20°C) | 8 | 6 | 4 | 4 | 4 | 4 | 3 | 3 |
| W. V . | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C) / Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C) / Z(+20°C) | 8 | 6 | 4 | 4 | 4 | 4 | 3 | 3 | | | | | | | | | | | | | | | | | | | | |
| High Temp. Load Test | 105°C 1,000 hours, at rated voltage, during which the polarity of DC voltage is reversed for each 500 hours, the capacitor shall meet the following limits: Capacitance change ... ≦ ±20% of the initial measured value Tan δ ... ≦ 200% of the initial specified value DC leakage current ... ≦ the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Temp. Non-Load Test | After storage for 500 hours at 105°C with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirements specified in the table "High temperature loading" can be met. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Note: Some cleaning solvents may adversely affect the capacitors . Consult us about the suitable type of cleaning solvents to be used.

DRAWING



Unit :mm

| | | | | |
|----|------|------|------|------|
| ΦD | 4 | 5 | 6.3 | 8 |
| P | 1.5 | 2.0 | 2.5 | 3.5 |
| Φd | 0.45 | 0.45 | 0.45 | 0.45 |
| β | 1.0 | | | |

PART NUMBERING SYSTEM

| | | | | | |
|-----------|------------|----------------|---------------|-------------|-------------|
| NM | □□□ | □ | □□□ | □ | □□ |
| Series | Rated Cap. | Cap. Tolerance | Rated Voltage | Case Size D | Case Size L |

NM Series

■ STANDARD RATINGS

| VVVdc Parameter Cap (μF) | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | 100 | |
|--------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--------------|------------------------------|
| | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) | ΦDxL (mm) | Ripple current (mArms) |
| 0.1 | | | | | | | | | | | 4 X 7 | 1 | 4 X 7 | 2.4 | 4 X 7 | 3 |
| 0.22 | | | | | | | | | | | 4 X 7 | 2 | 4 X 7 | 3.2 | 4 X 7 | 4.1 |
| 0.33 | | | | | | | | | | | 4 X 7 | 3.5 | 4 X 7 | 4 | 4 X 7 | 4.9 |
| 0.47 | | | | | | | | | | | 4 X 7 | 5 | 4 X 7 | 6 | 4 X 7 | 6.5 |
| 0.68 | | | | | | | | | | | 4 X 7 | 7 | 4 X 7 | 9 | 4 X 7 | 10 |
| 1 | | | | | | | | | | | 4 X 7 | 10 | 4 X 7 | 16 | 4 X 7 | 18 |
| 2.2 | | | | | | | | | | | 4 X 7 | 15 | 4 X 7 | 20 | | |
| 3.3 | | | | | | | | | 4 X 7 | 16 | 4 X 7 | 18 | 5 X 7 | 26 | | |
| 4.7 | | | | | | | | | 4 X 7 | 18 | 5 X 7 | 22 | 6.3 X 7 | 32 | | |
| 6.8 | | | | | | | 4 X 7 | 18 | 5 X 7 | 22 | 5 X 7 | 28 | 6.3 X 7 | 42 | | |
| 10 | 4 X 7 | 16 | 4 X 7 | 18 | 4 X 7 | 20 | 5 X 7 | 28 | 5 X 7 | 32 | 6.3 X 7 | 36 | 8 X 7 | | | |
| 22 | 4 X 7 | 20 | 4 X 7 | 32 | 5 X 7 | 36 | 6.3 X 7 | 44 | 6.3 X 7 | 48 | 8 X 7 | 53 | | | | |
| 33 | 4 X 7 | 26 | 5 X 7 | 36 | 5 X 7 | 42 | 6.3 X 7 | 52 | 8 X 7 | 67 | | | | | | |
| 47 | 5 X 7 | 45 | 5 X 7 | 60 | 6.3 X 7 | 78 | 8 X 7 | 85 | | | | | | | | |
| 68 | 6.3 X 7 | 45 | 6.3 X 7 | 78 | 8 X 7 | 82 | 8 X 7 | 95 | | | | | | | | |
| 100 | 6.3 X 7 | 76 | 8 X 7 | 102 | 8 X 7 | 105 | | | | | | | | | | |
| 220 | 8 X 7 | 115 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

→ Rated Ripple Current (mArms) at 86 120Hz
 → Case Size: ΦDxL (mm)