

## NXR Series

• 105°C 4,000 ~ 7,000Hrs assured.

- Low Impedance.
- For SMPS, IP-Board, Adaptor, Automotive equipment.
- RoHS compliant.
- Halogen-free capacitors are also available.

• AEC-Q200 compliant : Please contact us for more details, test data, information.

NXP  
(LXZ)

Solvent-proof

NXR

Low Imp.  
Downsized



### SPECIFICATIONS

| Item   | Characteristics   |                                 |           |      |             |        |             |                   |             |      |      |      |      |
|--|---|---------------------------------|-----------|------|-------------|--------|-------------|-------------------|-------------|------|------|------|------|
| Rated Voltage Range                                    | 6.3 ~ 35 V <sub>DC</sub>  |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Operating Temperature Range                            | -55 ~ +105°C  |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Capacitance Tolerance                                  | ±20%(M) (at 20°C, 120Hz)  |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Leakage Current  | I = 0.01CV (μA) or 3μA, whichever is greater.<br>Where, I:Max. leakage current(μA) C:Nominal capacitance(μF) V:Rated voltage(V <sub>DC</sub> )<br>(at 20°C, 2 minutes)  |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Dissipation Factor (Tanδ)                              | <table border="1"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td>TANδ(Max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.<br/>(at 20°C, 120Hz)</p>   | Rated Voltage(V <sub>DC</sub> ) | 6.3       | 10   | 16          | 25     | 35          | TANδ(Max.)        | 0.22        | 0.19 | 0.16 | 0.14 | 0.12 |
| Rated Voltage(V <sub>DC</sub> )                        | 6.3   | 10                              | 16        | 25   | 35          |        |             |                   |             |      |      |      |      |
| TANδ(Max.)   | 0.22  | 0.19                            | 0.16      | 0.14 | 0.12        |        |             |                   |             |      |      |      |      |
| Temperature Characteristics (Capacitance change ratio) | <table border="1"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td>Z(-55°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> <p>(at 20°C, 120Hz)</p>   | Rated Voltage(V <sub>DC</sub> ) | 6.3       | 10   | 16          | 25     | 35          | Z(-55°C)/Z(+20°C) | 4           | 3    | 3    | 3    | 3    |
| Rated Voltage(V <sub>DC</sub> )                        | 6.3   | 10                              | 16        | 25   | 35          |        |             |                   |             |      |      |      |      |
| Z(-55°C)/Z(+20°C)                                      | 4   | 3                               | 3         | 3    | 3           |        |             |                   |             |      |      |      |      |
| Load Life  | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) at 105°C for the specified period of time.</p> <table border="1"> <tr> <td>∅ D</td> <td>Life Time</td> </tr> <tr> <td>∅ 10</td> <td>4,000 hours</td> </tr> <tr> <td>∅ 12.5</td> <td>5,000 hours</td> </tr> <tr> <td>∅ 16, 18</td> <td>7,000 hours</td> </tr> </table> <p>Capacitance change ≤ ±20% of the initial value<br/>Tanδ ≤ 200% of the initial specified value<br/>Leakage Current ≤ The initial specified value</p> | ∅ D                             | Life Time | ∅ 10 | 4,000 hours | ∅ 12.5 | 5,000 hours | ∅ 16, 18          | 7,000 hours |      |      |      |      |
| ∅ D  | Life Time   |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| ∅ 10   | 4,000 hours   |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| ∅ 12.5   | 5,000 hours   |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| ∅ 16, 18   | 7,000 hours   |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Shelf Life   | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change ≤ ±20% of the initial value<br/>Tanδ ≤ 200% of the initial specified value<br/>Leakage Current ≤ The initial specified value</p>  |                                 |           |      |             |        |             |                   |             |      |      |      |      |
| Others   | Satisfied characteristics KS C IEC 60384-4  |                                 |           |      |             |        |             |                   |             |      |      |      |      |

### DIMENSIONS OF NXR Series

Unit(mm)

Marking : DARK BROWN SLEEVE, SILVER INK

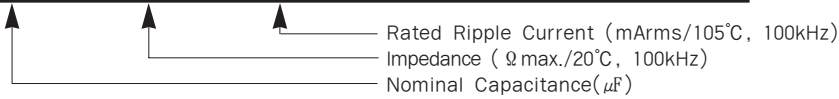
|     |               |      |     |     |
|-----|---------------|------|-----|-----|
| ∅D  | 10            | 12.5 | 16  | 18  |
| ∅d  | 0.6           | 0.6  | 0.8 | 0.8 |
| F   | 5.0           | 5.0  | 7.5 | 7.5 |
| ∅D' | ∅D + 0.5 max. |      |     |     |
| L'  | L + 2.0 max.  |      |     |     |

NXR Series

## RATINGS OF NXR Series

| V <sub>dc</sub><br>#D×L(mm) | 6.3    |       |        | 10    |       |        | 16    |       |        |
|-----------------------------|--------|-------|--------|-------|-------|--------|-------|-------|--------|
|                             | μF     | IMP.  | Ripple | μF    | IMP.  | Ripple | μF    | IMP.  | Ripple |
| 10 × 12.5                   | 1,500  | 0.063 | 960    | 1,000 | 0.063 | 960    | 820   | 0.063 | 960    |
| 10 × 16                     | 2,200  | 0.049 | 1,240  | 1,800 | 0.049 | 1,240  | 1,200 | 0.049 | 1,240  |
| 10 × 20                     | 3,300  | 0.035 | 1,550  | 2,200 | 0.035 | 1,550  | 1,800 | 0.035 | 1,550  |
| 10 × 25                     | 3,900  | 0.033 | 1,740  | 2,700 | 0.033 | 1,740  | 2,200 | 0.033 | 1,740  |
| 12.5 × 20                   | 4,700  | 0.029 | 1,890  | 3,900 | 0.029 | 1,890  | 2,700 | 0.029 | 1,890  |
| 12.5 × 25                   | 5,600  | 0.022 | 2,350  | 4,700 | 0.022 | 2,350  | 3,300 | 0.022 | 2,350  |
| 16 × 20                     | 6,800  | 0.026 | 2,330  | 4,700 | 0.026 | 2,330  | 3,900 | 0.026 | 2,330  |
| 18 × 20                     | 8,200  | 0.025 | 2,640  | 6,800 | 0.025 | 2,640  | 5,600 | 0.025 | 2,640  |
| 16 × 25                     | 10,000 | 0.019 | 2,760  | 6,800 | 0.019 | 2,760  | 5,600 | 0.019 | 2,760  |
| 18 × 25                     | 12,000 | 0.018 | 2,850  | 8,200 | 0.018 | 2,850  | 8,200 | 0.018 | 2,850  |

| V <sub>dc</sub><br>#D×L(mm) | 25    |       |        | 35    |       |        |
|-----------------------------|-------|-------|--------|-------|-------|--------|
|                             | μF    | IMP.  | Ripple | μF    | IMP.  | Ripple |
| 10 × 12.5                   | 470   | 0.063 | 960    | 330   | 0.063 | 960    |
| 10 × 16                     | 820   | 0.049 | 1,240  | 680   | 0.049 | 1,240  |
| 10 × 20                     | 1,200 | 0.035 | 1,550  | 820   | 0.035 | 1,550  |
| 10 × 25                     | 1,500 | 0.033 | 1,740  | 1,200 | 0.033 | 1,740  |
| 12.5 × 20                   | 1,800 | 0.029 | 1,890  | 1,500 | 0.029 | 1,890  |
| 12.5 × 25                   | 2,700 | 0.022 | 2,350  | 1,800 | 0.022 | 2,350  |
| 16 × 20                     | 2,700 | 0.026 | 2,330  | 1,800 | 0.026 | 2,330  |
| 18 × 20                     | 3,300 | 0.025 | 2,640  | 2,200 | 0.025 | 2,640  |
| 16 × 25                     | 3,900 | 0.019 | 2,760  | 2,700 | 0.019 | 2,760  |
| 18 × 25                     | 4,700 | 0.018 | 2,850  | 3,300 | 0.018 | 2,850  |



## RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Cap.(μF) \ Freq.(Hz) | 120  | 1k   | 10k  | 50k  | 100k |
|----------------------|------|------|------|------|------|
| 330 ~ 470            | 0.50 | 0.85 | 0.94 | 0.96 | 1.00 |
| 680 ~ 1,800          | 0.60 | 0.87 | 0.95 | 0.97 | 1.00 |
| 2,200 ~ 3,900        | 0.75 | 0.90 | 0.95 | 0.97 | 1.00 |
| 4,700 ~ 12,000       | 0.85 | 0.95 | 0.98 | 0.99 | 1.00 |