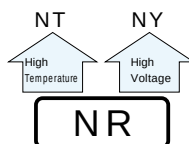


**NR** Screw Terminal Type, 85°C Standard  
series



High Ripple  
Current

- Load life of 5000 hours application of rated ripple current at 85°C.
- Extended range up to  $\phi 100 \times 250$  L size.
- Compliant to the RoHS directive (2002/95/EC).

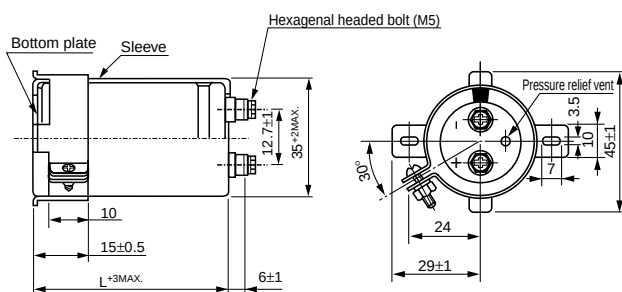


## Specifications

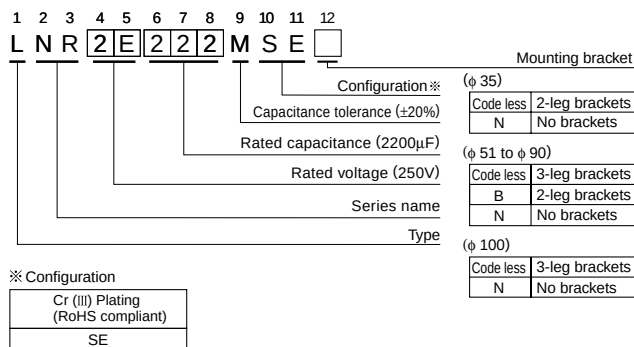
| Item                                   | Performance Characteristics                                                                                                                                                                                                |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------------------|------|------|--------------------|---------------------------------------------------|------|------------|-----------------------------------------|------|------|
| Category Temperature Range             | - 40 to +85°C (10 to 100V) , - 25 to +85°C (160 to 250V)                                                                                                                                                                   |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
| Rated Voltage Range                    | 10 to 250V                                                                                                                                                                                                                 |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
| Rated Capacitance Range                | 1000 to 2200000μF                                                                                                                                                                                                          |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
| Capacitance Tolerance                  | ±20% at 120Hz, 20°C                                                                                                                                                                                                        |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
| Leakage Current                        | After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA) or 5 mA, whichever is smaller (at 20°C) .<br>[C:Rated Capacitance (μF) , V:Voltage(V)]                                   |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
| Tangent of loss angle<br>(tan δ) (MAX) |                                                                                                                                           | 10         | 16         | 25                | 35   | 50   | 63                 | 80                                                | 100  | 160 to 250 | Measurement frequency:<br>120Hz at 20°C |      |      |
|                                        |                                                                                                                                                                                                                            | 35         | 80 to 100  | 0.6               | 0.4  | 0.35 | 0.3                | 0.25                                              | 0.25 | 0.2        |                                         | 0.12 | 0.15 |
|                                        |                                                                                                                                                                                                                            | 120        | 0.7        | 0.55              | 0.4  | 0.3  | 0.25               | 0.25                                              | 0.2  | 0.15       |                                         | 0.15 |      |
|                                        |                                                                                                                                                                                                                            | 51         | 70 to 100  | 0.9               | 0.6  | 0.45 | 0.35               | 0.25                                              | 0.25 | 0.2        |                                         | 0.15 | 0.15 |
|                                        |                                                                                                                                                                                                                            | 120 to 140 | 1.0        | 0.8               | 0.5  | 0.4  | 0.3                | 0.25                                              | 0.2  | 0.15       |                                         | 0.15 |      |
|                                        |                                                                                                                                                                                                                            | 63.5       | 100        | 0.9               | —    | —    | 0.5                | 0.35                                              | 0.3  | 0.25       |                                         | —    | 0.2  |
|                                        |                                                                                                                                                                                                                            | 120 to 140 | 1.2        | 0.75              | 0.65 | —    | —                  | 0.3                                               | 0.3  | 0.2        |                                         | 0.2  |      |
|                                        |                                                                                                                                                                                                                            | 76.2       | 100        | 1.6               | —    | —    | 0.65               | —                                                 | —    | —          |                                         | —    | 0.2  |
|                                        |                                                                                                                                                                                                                            | 120 to 140 | 1.6        | 1.1               | 0.75 | 0.75 | 0.55               | 0.5                                               | 0.35 | 0.3        |                                         | 0.2  |      |
|                                        |                                                                                                                                                                                                                            | 90         | 140 to 220 | 2.0               | 1.5  | 1.0  | 0.9                | 0.75                                              | 0.6  | 0.4        |                                         | 0.3  | 0.25 |
| 100                                    | 250                                                                                                                                                                                                                        | 2.4        | 1.5        | 1.0               | 0.9  | 0.75 | 0.6                | 0.4                                               | 0.3  | 0.25       |                                         |      |      |
| Stability at Low Temperature           | Measurement frequency : 120Hz                                                                                                                                                                                              |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |
|                                        | Rated voltage(V)                                                                                                                                                                                                           |            |            | 10 to 100         |      |      |                    | 160 to 250                                        |      |            |                                         |      |      |
|                                        | Impedance ratio ZT/Z20(MAX.)                                                                                                                                                                                               |            |            | Z - 40°C / Z+20°C |      |      |                    | Z - 25°C / Z+20°C                                 |      |            |                                         |      |      |
|                                        |                                                                                                                                                                                                                            |            |            | 12                |      |      |                    | 8                                                 |      |            |                                         |      |      |
| Endurance                              | The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 5000 hours at 85°C, the peak voltage shall not exceed the rated voltage. |            |            |                   |      |      | Capacitance change | Within ±15% of the initial capacitance value      |      |            |                                         |      |      |
|                                        |                                                                                                                                                                                                                            |            |            |                   |      |      | tan δ              | 175% or less than the initial specified value     |      |            |                                         |      |      |
|                                        |                                                                                                                                                                                                                            |            |            |                   |      |      | Leakage current    | Less than or equal to the initial specified value |      |            |                                         |      |      |
| Shelf Life                             | After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the requirements listed at right.                        |            |            |                   |      |      | Capacitance change | Within ±20% of the initial capacitance value      |      |            |                                         |      |      |
|                                        |                                                                                                                                                                                                                            |            |            |                   |      |      | tan δ              | 175% or less than the initial specified value     |      |            |                                         |      |      |
|                                        |                                                                                                                                                                                                                            |            |            |                   |      |      | Leakage current    | Less than or equal to the initial specified value |      |            |                                         |      |      |
| Marking                                | Printed with black color letter on light blue sleeve.                                                                                                                                                                      |            |            |                   |      |      |                    |                                                   |      |            |                                         |      |      |

## Drawing

φ35 Screw terminal type



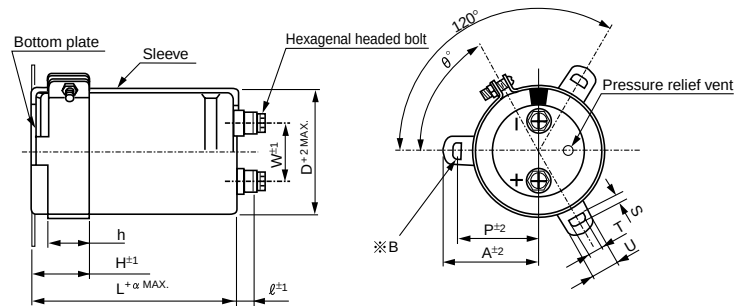
## Type numbering system (Example : 250V 2200μF)



Please refer to page 282 for schematic of dimensions.  
※ Please contact to us if PVCless products are required.

● Dimension table in next page.

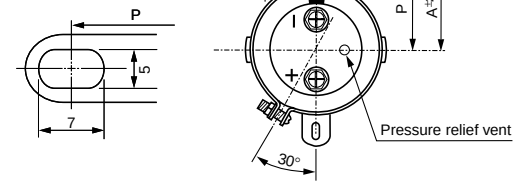
## NR series

Screw terminal types for  $\phi 51$  and larger**Note:**

Capacitors with body dia.  $\phi 51$  or larger are furnished with 3-leg brackets shown above as standard.

If these capacitors are preferred to have 2-leg brackets as shown right, add "B" in the 12th digit of type numbering system.

\*B  
3-leg brackets for  $\phi 90$  capacitors have different hole shapes from the ordinary ones as illustrated below.



## ● Dimension of terminal pitch (W) and length (ℓ) and Nominal dia. of bolt (mm)

| $\phi D$ | W    | $\ell$ | $\alpha$ | Nominal dia. of bolt |
|----------|------|--------|----------|----------------------|
| 51       | 22.0 | 6      | 3        | M5                   |
| 63.5     | 28.6 | 6      | 3        | M5                   |
| 76.2     | 31.8 | 6      | 3        | M5                   |
| 90       | 31.8 | 6      | 3        | M5                   |
| 100      | 41.5 | 10     | 4        | M8                   |

## ● Dimensions of mounting bracket (mm)

| Symbol         | Leg Shape<br>$\phi D$ | 3-Legs |      |      |      |      | 2-Legs |      |      |     |
|----------------|-----------------------|--------|------|------|------|------|--------|------|------|-----|
|                |                       | 51     | 63.5 | 76.2 | 90   | 100  | 51     | 63.5 | 76.2 | 90  |
| P              |                       | 32.5   | 38.1 | 44.5 | 50.8 | 56.3 | 33.2   | 40.5 | 46.5 | 53  |
| A              |                       | 38.5   | 43   | 49.2 | 58.5 | 62   | 40     | 46.5 | 53   | 59  |
| T              |                       | 7.5    | 8.0  | 7.0  | 8.0  | 8.0  | 6.0    | 7.0  | 6.0  | 6.0 |
| S              |                       | 5.0    | 5.0  | 5.0  | 5.0  | 5.0  | 4.5    | 4.5  | 4.5  | 4.5 |
| U              |                       | 12     | 14   | 14   | 18   | 16   | 14     | 14   | 14   | 14  |
| $\theta^\circ$ |                       | 60     | 60   | 60   | 60   | 60   | 30     | 30   | 30   | 30  |
| H              |                       | 20     | 25   | 30   | 35   | 36   | 25     | 35   | 35   | 35  |
| h              |                       | 15     | 20   | 24   | 25   | 30   | 15     | 20   | 20   | 20  |

## ■ Dimensions

| 10V (1A)            |                                |                        |               |                         |             |
|---------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu F$ ) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 47000               | 35×80                          | 6.0                    | 0.60          | 2.05                    | LNR1A473MSE |
| 68000               | 35×80                          | 7.2                    | 0.60          | 2.47                    | LNR1A683MSE |
| 100000              | 35×100                         | 8.8                    | 0.60          | 3.00                    | LNR1A104MSE |
| 150000              | 51×80                          | 10.7                   | 0.90          | 3.67                    | LNR1A154MSE |
| 220000              | 51×100                         | 13.0                   | 0.90          | 4.44                    | LNR1A224MSE |
| 330000              | 63.5×100                       | 15.9                   | 0.90          | 5.00                    | LNR1A334MSE |
| 470000              | 63.5×120                       | 19.0                   | 1.20          | 5.00                    | LNR1A474MSE |
| 680000              | 76.2×120                       | 22.8                   | 1.60          | 5.00                    | LNR1A684MSE |
| 1000000             | 90×170                         | 27.7                   | 2.00          | 5.00                    | LNR1A105MSE |
| 1500000             | 90×220                         | 33.9                   | 2.00          | 5.00                    | LNR1A155MSE |
| 2200000             | 100×250                        | 41.1                   | 2.40          | 5.00                    | LNR1A225MSE |

| 16V (1C)            |                                |                        |               |                         |             |
|---------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu F$ ) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 47000               | 35×80                          | 6.4                    | 0.40          | 2.60                    | LNR1C473MSE |
| 68000               | 35×100                         | 7.9                    | 0.40          | 3.12                    | LNR1C683MSE |
| 100000              | 35×120                         | 10.6                   | 0.55          | 3.79                    | LNR1C104MSE |
| 150000              | 51×100                         | 11.5                   | 0.60          | 4.64                    | LNR1C154MSE |
| 220000              | 51×120                         | 15.6                   | 0.80          | 5.00                    | LNR1C224MSE |
| 330000              | 63.5×120                       | 25.1                   | 0.75          | 5.00                    | LNR1C334MSE |
| 470000              | 76.2×120                       | 30.5                   | 1.10          | 5.00                    | LNR1C474MSE |
| 680000              | 90×170                         | 33.0                   | 1.50          | 5.00                    | LNR1C684MSE |
| 1000000             | 90×220                         | 36.0                   | 1.50          | 5.00                    | LNR1C105MSE |
| 1500000             | 100×250                        | 39.7                   | 1.50          | 5.00                    | LNR1C155MSE |

Rated ripple current (Arms) at 85°C 120Hz

## ■ Dimensions

| 25V (1E)           |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 33000              | 35 $\times$ 80                 | 6.2                    | 0.35          | 2.72                    | LNR1E333MSE |
| 47000              | 35 $\times$ 100                | 8.2                    | 0.35          | 3.25                    | LNR1E473MSE |
| 68000              | 35 $\times$ 120                | 9.4                    | 0.40          | 3.91                    | LNR1E683MSE |
| 100000             | 51 $\times$ 100                | 12.0                   | 0.45          | 4.74                    | LNR1E104MSE |
| 150000             | 51 $\times$ 120                | 15.3                   | 0.50          | 5.00                    | LNR1E154MSE |
| 220000             | 63.5 $\times$ 120              | 18.9                   | 0.65          | 5.00                    | LNR1E224MSE |
| 330000             | 76.2 $\times$ 120              | 24.8                   | 0.75          | 5.00                    | LNR1E334MSE |
| 470000             | 90 $\times$ 170                | 30.8                   | 1.00          | 5.00                    | LNR1E474MSE |
| 680000             | 90 $\times$ 220                | 33.3                   | 1.00          | 5.00                    | LNR1E684MSE |
| 1000000            | 100 $\times$ 250               | 36.4                   | 1.00          | 5.00                    | LNR1E105MSE |

| 35V (1V)           |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 33000              | 35 $\times$ 80                 | 6.2                    | 0.30          | 3.22                    | LNR1V333MSE |
| 47000              | 35 $\times$ 120                | 8.2                    | 0.30          | 3.84                    | LNR1V473MSE |
| 68000              | 51 $\times$ 80                 | 9.3                    | 0.35          | 4.62                    | LNR1V683MSE |
| 100000             | 51 $\times$ 120                | 13.6                   | 0.40          | 5.00                    | LNR1V104MSE |
| 150000             | 63.5 $\times$ 100              | 14.5                   | 0.50          | 5.00                    | LNR1V154MSE |
| 220000             | 76.2 $\times$ 100              | 16.8                   | 0.65          | 5.00                    | LNR1V224MSE |
| 330000             | 76.2 $\times$ 140              | 24.8                   | 0.75          | 5.00                    | LNR1V334MSE |
| 470000             | 90 $\times$ 170                | 32.6                   | 0.90          | 5.00                    | LNR1V474MSE |
| 680000             | 90 $\times$ 220                | 35.2                   | 0.90          | 5.00                    | LNR1V684MSE |
| 1000000            | 100 $\times$ 250               | 38.5                   | 0.90          | 5.00                    | LNR1V105MSE |

| 50V (1H)           |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 15000              | 35 $\times$ 80                 | 5.4                    | 0.25          | 2.59                    | LNR1H153MSE |
| 22000              | 35 $\times$ 100                | 6.1                    | 0.25          | 3.14                    | LNR1H223MSE |
| 33000              | 51 $\times$ 70                 | 7.0                    | 0.25          | 3.85                    | LNR1H333MSE |
| 47000              | 51 $\times$ 90                 | 8.6                    | 0.25          | 4.59                    | LNR1H473MSE |
| 68000              | 51 $\times$ 100                | 11.0                   | 0.25          | 5.00                    | LNR1H683MSE |
| 100000             | 63.5 $\times$ 100              | 14.2                   | 0.35          | 5.00                    | LNR1H104MSE |
| 150000             | 76.2 $\times$ 120              | 18.6                   | 0.55          | 5.00                    | LNR1H154MSE |
| 220000             | 90 $\times$ 140                | 20.3                   | 0.75          | 5.00                    | LNR1H224MSE |
| 330000             | 90 $\times$ 170                | 25.3                   | 0.75          | 5.00                    | LNR1H334MSE |
| 470000             | 90 $\times$ 220                | 33.2                   | 0.75          | 5.00                    | LNR1H474MSE |
| 680000             | 100 $\times$ 250               | 36.0                   | 0.75          | 5.00                    | LNR1H684MSE |

| 63V (1J)           |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 10000              | 35 $\times$ 80                 | 4.1                    | 0.25          | 2.38                    | LNR1J103MSE |
| 15000              | 35 $\times$ 100                | 5.5                    | 0.25          | 2.91                    | LNR1J153MSE |
| 22000              | 35 $\times$ 120                | 7.1                    | 0.25          | 3.53                    | LNR1J223MSE |
| 33000              | 51 $\times$ 80                 | 8.8                    | 0.25          | 4.32                    | LNR1J333MSE |
| 47000              | 51 $\times$ 120                | 11.7                   | 0.25          | 5.00                    | LNR1J473MSE |
| 68000              | 63.5 $\times$ 100              | 15.0                   | 0.30          | 5.00                    | LNR1J683MSE |
| 100000             | 63.5 $\times$ 140              | 20.8                   | 0.30          | 5.00                    | LNR1J104MSE |
| 150000             | 76.2 $\times$ 140              | 26.0                   | 0.50          | 5.00                    | LNR1J154MSE |
| 220000             | 90 $\times$ 170                | 28.3                   | 0.60          | 5.00                    | LNR1J224MSE |
| 330000             | 90 $\times$ 220                | 31.2                   | 0.60          | 5.00                    | LNR1J334MSE |
| 470000             | 100 $\times$ 250               | 33.6                   | 0.60          | 5.00                    | LNR1J474MSE |

| 80V (1K)           |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 10000              | 35 $\times$ 80                 | 4.2                    | 0.20          | 2.68                    | LNR1K103MSE |
| 15000              | 35 $\times$ 120                | 6.0                    | 0.20          | 3.28                    | LNR1K153MSE |
| 22000              | 51 $\times$ 80                 | 6.5                    | 0.20          | 3.97                    | LNR1K223MSE |
| 33000              | 51 $\times$ 120                | 9.2                    | 0.20          | 4.87                    | LNR1K333MSE |
| 47000              | 63.5 $\times$ 100              | 12.7                   | 0.25          | 5.00                    | LNR1K473MSE |
| 68000              | 63.5 $\times$ 140              | 15.5                   | 0.30          | 5.00                    | LNR1K683MSE |
| 100000             | 76.2 $\times$ 140              | 21.3                   | 0.35          | 5.00                    | LNR1K104MSE |
| 150000             | 90 $\times$ 170                | 26.5                   | 0.40          | 5.00                    | LNR1K154MSE |
| 220000             | 90 $\times$ 220                | 28.9                   | 0.40          | 5.00                    | LNR1K224MSE |
| 330000             | 100 $\times$ 250               | 31.8                   | 0.40          | 5.00                    | LNR1K334MSE |

| 100V (2A)          |                                |                        |               |                         |             |
|--------------------|--------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi D \times L$ (mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 4700               | 35 $\times$ 80                 | 3.8                    | 0.12          | 2.05                    | LNR2A472MSE |
| 6800               | 35 $\times$ 100                | 4.5                    | 0.12          | 2.47                    | LNR2A682MSE |
| 10000              | 35 $\times$ 120                | 5.3                    | 0.15          | 3.00                    | LNR2A103MSE |
| 15000              | 51 $\times$ 80                 | 6.0                    | 0.15          | 3.67                    | LNR2A153MSE |
| 22000              | 51 $\times$ 100                | 6.8                    | 0.15          | 4.45                    | LNR2A223MSE |
| 33000              | 51 $\times$ 140                | 10.0                   | 0.15          | 5.00                    | LNR2A333MSE |
| 47000              | 63.5 $\times$ 140              | 14.4                   | 0.20          | 5.00                    | LNR2A473MSE |
| 68000              | 76.2 $\times$ 140              | 18.2                   | 0.30          | 5.00                    | LNR2A683MSE |
| 100000             | 90 $\times$ 170                | 22.1                   | 0.30          | 5.00                    | LNR2A104MSE |
| 150000             | 90 $\times$ 220                | 27.0                   | 0.30          | 5.00                    | LNR2A154MSE |
| 220000             | 100 $\times$ 250               | 32.7                   | 0.30          | 5.00                    | LNR2A224MSE |

Rated ripple current (Arms) at 85°C, 120Hz

## NR series

## ■Dimensions

| 160V (2C)          |                                 |                        |               |                         |             |
|--------------------|---------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 2200               | 35 $\times$ 80                  | 3.2                    | 0.15          | 1.77                    | LNR2C222MSE |
| 3300               | 35 $\times$ 120                 | 4.7                    | 0.15          | 2.17                    | LNR2C332MSE |
| 4700               | 51 $\times$ 80                  | 5.0                    | 0.15          | 2.60                    | LNR2C472MSE |
| 6800               | 51 $\times$ 100                 | 6.4                    | 0.15          | 3.12                    | LNR2C682MSE |
| 10000              | 63.5 $\times$ 100               | 9.1                    | 0.20          | 3.79                    | LNR2C103MSE |
| 15000              | 76.2 $\times$ 100               | 12.0                   | 0.20          | 4.64                    | LNR2C153MSE |
| 22000              | 76.2 $\times$ 140               | 16.9                   | 0.20          | 5.00                    | LNR2C223MSE |
| 33000              | 90 $\times$ 140                 | 19.2                   | 0.25          | 5.00                    | LNR2C333MSE |
| 47000              | 90 $\times$ 170                 | 20.6                   | 0.25          | 5.00                    | LNR2C473MSE |
| 68000              | 90 $\times$ 220                 | 22.3                   | 0.25          | 5.00                    | LNR2C683MSE |
| 100000             | 100 $\times$ 250                | 24.4                   | 0.25          | 5.00                    | LNR2C104MSE |

| 200V (2D)          |                                 |                        |               |                         |             |
|--------------------|---------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 1500               | 35 $\times$ 80                  | 2.9                    | 0.15          | 1.64                    | LNR2D152MSE |
| 2200               | 35 $\times$ 100                 | 3.5                    | 0.15          | 1.99                    | LNR2D222MSE |
| 3300               | 51 $\times$ 80                  | 4.8                    | 0.15          | 2.43                    | LNR2D332MSE |
| 4700               | 51 $\times$ 100                 | 6.3                    | 0.15          | 2.90                    | LNR2D472MSE |
| 6800               | 51 $\times$ 140                 | 7.3                    | 0.15          | 3.49                    | LNR2D682MSE |
| 10000              | 63.5 $\times$ 120               | 9.8                    | 0.20          | 4.24                    | LNR2D103MSE |
| 15000              | 76.2 $\times$ 120               | 13.0                   | 0.20          | 5.00                    | LNR2D153MSE |
| 22000              | 90 $\times$ 140                 | 15.9                   | 0.25          | 5.00                    | LNR2D223MSE |
| 33000              | 90 $\times$ 170                 | 19.5                   | 0.25          | 5.00                    | LNR2D333MSE |
| 47000              | 90 $\times$ 220                 | 20.9                   | 0.25          | 5.00                    | LNR2D473MSE |
| 68000              | 100 $\times$ 250                | 22.6                   | 0.25          | 5.00                    | LNR2D683MSE |

| 250V (2E)          |                                 |                        |               |                         |             |
|--------------------|---------------------------------|------------------------|---------------|-------------------------|-------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated ripple<br>(Arms) | $\tan \delta$ | Leakage Current<br>(mA) | Code        |
| 1000               | 35 $\times$ 80                  | 2.4                    | 0.15          | 1.50                    | LNR2E102MSE |
| 1500               | 35 $\times$ 100                 | 3.0                    | 0.15          | 1.83                    | LNR2E152MSE |
| 2200               | 51 $\times$ 80                  | 4.0                    | 0.15          | 2.22                    | LNR2E222MSE |
| 3300               | 51 $\times$ 100                 | 5.4                    | 0.15          | 2.72                    | LNR2E332MSE |
| 4700               | 63.5 $\times$ 100               | 7.3                    | 0.20          | 3.25                    | LNR2E472MSE |
| 6800               | 63.5 $\times$ 120               | 8.9                    | 0.20          | 3.91                    | LNR2E682MSE |
| 10000              | 76.2 $\times$ 120               | 11.8                   | 0.20          | 4.74                    | LNR2E103MSE |
| 15000              | 90 $\times$ 140                 | 16.4                   | 0.25          | 5.00                    | LNR2E153MSE |
| 22000              | 90 $\times$ 170                 | 17.9                   | 0.25          | 5.00                    | LNR2E223MSE |
| 33000              | 90 $\times$ 220                 | 19.7                   | 0.25          | 5.00                    | LNR2E333MSE |
| 47000              | 100 $\times$ 250                | 21.2                   | 0.25          | 5.00                    | LNR2E473MSE |

Rated ripple current (Arms) at 85°C, 120Hz

## ●Frequency coefficient of rated ripple current

| Frequency (Hz) |             | 60   | 120  | 360  | 1k   | 10k or more |
|----------------|-------------|------|------|------|------|-------------|
| Coeff.         | 10 to 100V  | 0.90 | 1.00 | 1.08 | 1.15 | 1.15        |
|                | 160 to 250V | 0.88 | 1.00 | 1.08 | 1.15 | 1.20        |



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

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