

## SRG Series

- Low profile :  $\phi 10 \times 12.5\text{mm}$  to  $\phi 18 \times 25\text{mm}$
- Endurance : 2,000 hours at 85°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant

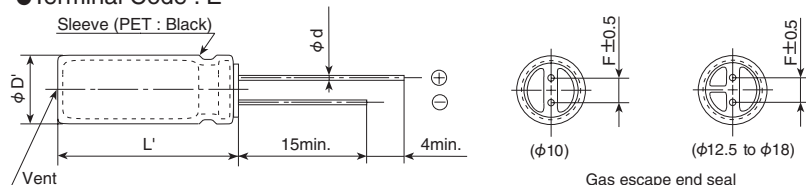


## ◆ SPECIFICATIONS

| Items                                                        | Characteristics                                                                                                                                                                                                                                                                      |                                      |      |      |      |      |      |                 |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------|------|------|------|------|-----------------|
| Category                                                     | -40 to +85℃                                                                                                                                                                                                                                                                          |                                      |      |      |      |      |      |                 |
| Temperature Range                                            |                                                                                                                                                                                                                                                                                      |                                      |      |      |      |      |      |                 |
| Rated Voltage Range                                          | 6.3 to 50V <sub>dc</sub>                                                                                                                                                                                                                                                             |                                      |      |      |      |      |      |                 |
| Capacitance Tolerance                                        | ± 20% (M) (at 20℃, 120Hz)                                                                                                                                                                                                                                                            |                                      |      |      |      |      |      |                 |
| Leakage Current                                              | I=0.01CV or 3μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20℃ after 2 minutes)                                                                                                                         |                                      |      |      |      |      |      |                 |
| Dissipation Factor<br>(tan δ)                                | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                                                                                                     | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  | (at 20℃, 120Hz) |
|                                                              | tan δ (Max.)                                                                                                                                                                                                                                                                         | 0.28                                 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 |                 |
|                                                              | When nominal capacitance exceeds 1,000μF, add 0.03 to the value above for each 1,000μF increase.                                                                                                                                                                                     |                                      |      |      |      |      |      |                 |
| Low Temperature<br>Characteristics<br>(Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                                                                                                     | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  | (at 120Hz)      |
|                                                              | Z(-25℃)/Z(+20℃)                                                                                                                                                                                                                                                                      | 5                                    | 4    | 3    | 2    | 2    | 2    |                 |
|                                                              | Z(-40℃)/Z(+20℃)                                                                                                                                                                                                                                                                      | 12                                   | 10   | 8    | 5    | 4    | 3    |                 |
| Endurance                                                    | The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 hours at 85℃.                                                                                                                                   |                                      |      |      |      |      |      |                 |
|                                                              | Capacitance change                                                                                                                                                                                                                                                                   | ≤ ±20% of the initial value          |      |      |      |      |      |                 |
|                                                              | D.F. (tan δ)                                                                                                                                                                                                                                                                         | ≤200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | Leakage current                                                                                                                                                                                                                                                                      | ≤The initial specified value         |      |      |      |      |      |                 |
| Shelf Life                                                   | The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 85℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |                                      |      |      |      |      |      |                 |
|                                                              | Capacitance change                                                                                                                                                                                                                                                                   | ≤ ±20% of the initial value          |      |      |      |      |      |                 |
|                                                              | D.F. (tan δ)                                                                                                                                                                                                                                                                         | ≤200% of the initial specified value |      |      |      |      |      |                 |
|                                                              | Leakage current                                                                                                                                                                                                                                                                      | ≤The initial specified value         |      |      |      |      |      |                 |

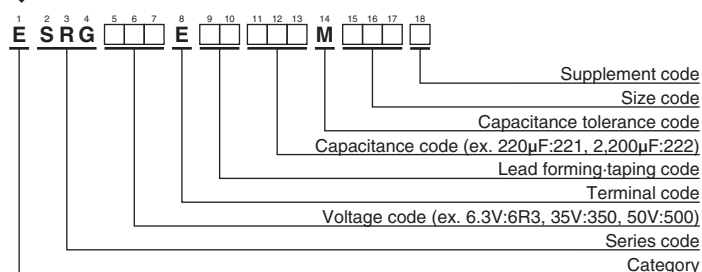
## ◆ DIMENSIONS [mm]

## ● Terminal Code : E



| φD  | 10 & 12.5  | 16 & 18 |
|-----|------------|---------|
| φd  | 0.6        | 0.8     |
| F   | 5.0        | 7.5     |
| φD' | φD+0.5max. |         |
| L'  | L+1.5max.  |         |

## ◆ PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"



## SRG Series

## ◆STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case code<br>φD×L(mm) | tan δ | Rated ripple<br>current<br>(mA <sub>rms</sub> /85°C, 120Hz) | Part No.           | WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case code<br>φD×L(mm) | tan δ | Rated ripple<br>current<br>(mA <sub>rms</sub> /85°C, 120Hz) | Part No.           |
|--------------------------|-------------|-----------------------|-------|-------------------------------------------------------------|--------------------|--------------------------|-------------|-----------------------|-------|-------------------------------------------------------------|--------------------|
| 6.3                      | 4,700       | 16 × 15               | 0.37  | 1,410                                                       | ESRG6R3E□□472ML15S | 25                       | 470         | 10 × 12.5             | 0.16  | 525                                                         | ESRG250E□□471MJC5S |
|                          | 6,800       | 18 × 15               | 0.43  | 1,660                                                       | ESRG6R3E□□682MM15S |                          | 1,000       | 12.5 × 15             | 0.16  | 830                                                         | ESRG250E□□102MK15S |
|                          | 10,000      | 18 × 20               | 0.55  | 2,020                                                       | ESRG6R3E□□103MM20S |                          | 2,200       | 18 × 15               | 0.19  | 1,360                                                       | ESRG250E□□222MM15S |
| 10                       | 1,000       | 10 × 12.5             | 0.24  | 625                                                         | ESRG100E□□102MJC5S |                          | 3,300       | 18 × 20               | 0.22  | 1,720                                                       | ESRG250E□□332MM20S |
|                          | 2,200       | 12.5 × 15             | 0.27  | 970                                                         | ESRG100E□□222MK15S | 35                       | 4,700       | 18 × 25               | 0.25  | 2,070                                                       | ESRG250E□□472MM25S |
|                          | 3,300       | 16 × 15               | 0.30  | 1,310                                                       | ESRG100E□□332ML15S |                          | 330         | 10 × 12.5             | 0.14  | 475                                                         | ESRG350E□□331MJC5S |
|                          | 4,700       | 18 × 15               | 0.33  | 1,560                                                       | ESRG100E□□472MM15S |                          | 470         | 12.5 × 13             | 0.14  | 585                                                         | ESRG350E□□471MK13S |
|                          | 6,800       | 18 × 20               | 0.39  | 1,870                                                       | ESRG100E□□682MM20S |                          | 1,000       | 16 × 15               | 0.14  | 1,010                                                       | ESRG350E□□102ML15S |
|                          | 10,000      | 18 × 25               | 0.51  | 2,370                                                       | ESRG100E□□103MM25S |                          | 2,200       | 18 × 20               | 0.17  | 1,560                                                       | ESRG350E□□222MM20S |
| 16                       | 1,000       | 12.5 × 13             | 0.20  | 715                                                         | ESRG160E□□102MK13S | 50                       | 220         | 10 × 12.5             | 0.12  | 415                                                         | ESRG500E□□221MJC5S |
|                          | 2,200       | 16 × 15               | 0.23  | 1,160                                                       | ESRG160E□□222ML15S |                          | 330         | 12.5 × 13             | 0.12  | 525                                                         | ESRG500E□□331MK13S |
|                          | 3,300       | 18 × 15               | 0.26  | 1,460                                                       | ESRG160E□□332MM15S |                          | 470         | 16 × 15               | 0.12  | 745                                                         | ESRG500E□□471ML15S |
|                          | 4,700       | 18 × 20               | 0.29  | 1,770                                                       | ESRG160E□□472MM20S |                          | 1,000       | 18 × 20               | 0.12  | 1,160                                                       | ESRG500E□□102MM20S |
|                          | 6,800       | 18 × 25               | 0.35  | 2,170                                                       | ESRG160E□□682MM25S |                          |             |                       |       |                                                             |                    |

□□ : Enter the appropriate lead forming or taping code.

## ◆RATED RIPPLE CURRENT MULTIPLIERS

## ● Frequency Multipliers

| Capacitance(μF) \ Frequency(Hz) | 50   | 120  | 300  | 1k   | 10k  | 100k |
|---------------------------------|------|------|------|------|------|------|
| 220 to 1,000                    | 0.80 | 1.00 | 1.15 | 1.30 | 1.40 | 1.50 |
| 2,200 to                        | 0.85 | 1.00 | 1.03 | 1.05 | 1.08 | 1.08 |

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
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The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
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[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

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