



## SS Series

### Features

- 85°C, 1,000 hours assured
- Standard micro miniature size with 5mm height
- RoHS Compliance



Sleeve & Marking Color: Black & White

### Specifications

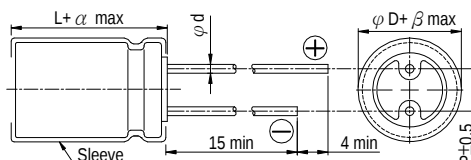
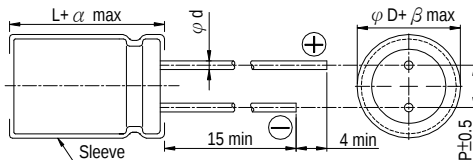
|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|--------|------|------|----|-----------------------|-----------|--------------------|---------------------------------------------------------------------------------|------|-----------------------------------|-----------------|------------------------|------------|-----------------|-----------------|------|------------|------|------|------|------|------|-----------------|----|----|---|---|---|---|---|
| Items                                      | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Category Temperature Range                 | -40℃ ~ +85℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Capacitance Tolerance                      | ±20% (at 120Hz, 20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Leakage Current (at 20℃)                   | I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes)<br>Where, C = rated capacitance in μF    V = rated DC working voltage in V                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Tanδ (at 120Hz, 20℃)                       | <table><tr><td>Rated Voltage</td><td>4</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td>Tanδ (max)</td><td>0.35</td><td>0.25</td><td>0.20</td><td>0.17</td><td>0.15</td><td>0.13</td><td>0.10</td></tr></table>                                                                                                                                                                                                                                                       |      |      |      |        |      |      |    | Rated Voltage         | 4         | 6.3                | 10                                                                              | 16   | 25                                | 35              | 50                     | Tanδ (max) | 0.35            | 0.25            | 0.20 | 0.17       | 0.15 | 0.13 | 0.10 |      |      |                 |    |    |   |   |   |   |   |
| Rated Voltage                              | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6.3  | 10   | 16   | 25     | 35   | 50   |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Tanδ (max)                                 | 0.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.25 | 0.20 | 0.17 | 0.15   | 0.13 | 0.10 |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Low Temperature Characteristics (at 120Hz) | <p>Impedance ratio shall not exceed the values given in the table below.</p> <table><tr><td colspan="2">Rated Voltage</td><td>4</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z(-25℃)/Z(+20℃)</td><td>7</td><td>6</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-40℃)/Z(+20℃)</td><td>15</td><td>12</td><td>8</td><td>6</td><td>4</td><td>4</td><td>4</td></tr></table>                                 |      |      |      |        |      |      |    | Rated Voltage         |           | 4                  | 6.3                                                                             | 10   | 16                                | 25              | 35                     | 50         | Impedance Ratio | Z(-25℃)/Z(+20℃) | 7    | 6          | 4    | 3    | 2    | 2    | 2    | Z(-40℃)/Z(+20℃) | 15 | 12 | 8 | 6 | 4 | 4 | 4 |
| Rated Voltage                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4    | 6.3  | 10   | 16     | 25   | 35   | 50 |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Impedance Ratio                            | Z(-25℃)/Z(+20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7    | 6    | 4    | 3      | 2    | 2    | 2  |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
|                                            | Z(-40℃)/Z(+20℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15   | 12   | 8    | 6      | 4    | 4    | 4  |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Endurance                                  | <table><tr><td>Test Time</td><td>1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ±30% of initial value 4 ~ 6.3V;<br/>Within ±25% of initial value 10 ~ 50V</td></tr><tr><td>Tanδ</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 1,000 hours at 85℃.</p> |      |      |      |        |      |      |    | Test Time             | 1,000 Hrs | Capacitance Change | Within ±30% of initial value 4 ~ 6.3V;<br>Within ±25% of initial value 10 ~ 50V | Tanδ | Less than 200% of specified value | Leakage Current | Within specified value |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Test Time                                  | 1,000 Hrs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Capacitance Change                         | Within ±30% of initial value 4 ~ 6.3V;<br>Within ±25% of initial value 10 ~ 50V                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Tanδ                                       | Less than 200% of specified value                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Leakage Current                            | Within specified value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Shelf Life Test                            | Test time: 500 hours; other items are the same as those for the Endurance.                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |      |        |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Ripple Current & Frequency Multipliers     | <table><tr><td>Freq.(Hz)<br/>Cap.(μF)</td><td>60 (50)</td><td>120</td><td>500</td><td>1k</td><td>10k up</td></tr><tr><td>Under 47</td><td>0.75</td><td>1.00</td><td>1.15</td><td>1.34</td><td>1.50</td></tr><tr><td>100 to 330</td><td>0.80</td><td>1.00</td><td>1.08</td><td>1.20</td><td>1.30</td></tr></table>                                                                                                                                                                                        |      |      |      |        |      |      |    | Freq.(Hz)<br>Cap.(μF) | 60 (50)   | 120                | 500                                                                             | 1k   | 10k up                            | Under 47        | 0.75                   | 1.00       | 1.15            | 1.34            | 1.50 | 100 to 330 | 0.80 | 1.00 | 1.08 | 1.20 | 1.30 |                 |    |    |   |   |   |   |   |
| Freq.(Hz)<br>Cap.(μF)                      | 60 (50)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 120  | 500  | 1k   | 10k up |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| Under 47                                   | 0.75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.00 | 1.15 | 1.34 | 1.50   |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |
| 100 to 330                                 | 0.80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.00 | 1.08 | 1.20 | 1.30   |      |      |    |                       |           |                    |                                                                                 |      |                                   |                 |                        |            |                 |                 |      |            |      |      |      |      |      |                 |    |    |   |   |   |   |   |

### Diagram of Dimensions

1. φ D = 3mm

2. φ D ≥ 4mm

Unit: mm



### Lead Spacing and Diameter

|          |     |      |     |     |     |
|----------|-----|------|-----|-----|-----|
| $\phi D$ | 3   | 4    | 5   | 6.3 | 8   |
| P        | 1.0 | 1.5  | 2.0 | 2.5 | 2.5 |
| $\phi d$ | 0.4 | 0.45 |     |     |     |
| $\alpha$ | 1.0 |      |     |     |     |
| $\beta$  | 0.5 |      |     |     |     |

Dimension: φ D × L(mm)

### Dimension & Permissible Ripple Current

Ripple Current: mA/rms at 120 Hz, 85°C

| μF   | V. DC Contents | 4V (0G) |     | 6.3V (0J) |        | 10V (1A) |        | 16V (1C) |        | 25V (1E) |        | 35V (1V) |        | 50V (1H) |        |
|------|----------------|---------|-----|-----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|      |                | φ D×L   | mA  | φ D×L     | mA     | φ D×L    | mA     | φ D×L    | mA     | φ D×L    | mA     | φ D×L    | mA     | φ D×L    | mA     |
| 0.1  | 0R1            |         |     |           |        |          |        |          |        |          |        |          |        | 3×5      | 1      |
| 0.22 | R22            |         |     |           |        |          |        |          |        |          |        |          |        | 3×5      | 2      |
| 0.33 | R33            |         |     |           |        |          |        |          |        |          |        |          |        | 3×5      | 2.8    |
| 0.47 | R47            |         |     |           |        |          |        |          |        |          |        |          |        | 3×5      | 4      |
| 1    | 010            |         |     |           |        |          |        |          |        |          |        |          |        | 4×5(3×5) | 8.7(7) |
| 2.2  | 2R2            |         |     |           |        |          |        |          |        |          |        | 4×5(3×5) | 8.7(7) | 4×5(3×5) | 10(9)  |
| 3.3  | 3R3            |         |     |           |        |          |        |          |        | 4×5(3×5) | 11(10) | 4×5      | 12     | 4×5      | 13     |
| 4.7  | 4R7            |         |     |           |        |          |        | 4×5(3×5) | 14(11) | 4×5      | 14     | 4×5      | 17     | 5×5      | 20     |
| 10   | 100            |         |     |           |        | 4×5(3×5) | 17(13) | 4×5      | 23     | 5×5      | 27     | 5×5      | 27     | 6.3×5    | 31     |
| 22   | 220            |         |     | 4×5(3×5)  | 22(18) | 5×5      | 30     | 5×5      | 35     | 6.3×5    | 42     | 6.3×5    | 46     | 6.3×5    | 46     |
| 33   | 330            | 4×5     | 27  | 4×5       | 34     | 5×5      | 41     | 5×5      | 49     | 6.3×5    | 52     | 6.3×5    | 52     | 8×5      | 66     |
| 47   | 470            | 4×5     | 34  | 5×5       | 37     | 6.3×5    | 50     | 6.3×5    | 58     | 6.3×5    | 58     | 8×5      | 72     | 8×5      | 80     |
| 100  | 101            | 5×5     | 55  | 6.3×5     | 62     | 6.3×5    | 70     | 8×5      | 99     | 8×5      | 99     |          |        |          |        |
| 220  | 221            | 6.3×5   | 74  | 8×5       | 104    | 8×5      | 120    |          |        |          |        |          |        |          |        |
| 330  | 331            | 8×5     | 105 | 8×5       | 120    |          |        |          |        |          |        |          |        |          |        |

### Part Numbering System

|            |             |                       |               |                              |             |             |                              |
|------------|-------------|-----------------------|---------------|------------------------------|-------------|-------------|------------------------------|
| SS series  | 330μF       | ±20%                  | 6.3V          | Bulk Package                 | Gas Type    | 8 φ ×5L     | Pb-free and PET coating case |
| <b>SS-</b> | <b>331</b>  | <b>M</b>              | <b>0J</b>     | <b>BK</b>                    | <b>-</b>    | <b>0805</b> |                              |
| Series     | Capacitance | Capacitance Tolerance | Rated Voltage | Lead Configuration & Package | Rubber Type | Case Size   | Lead Wire and Coating Type   |

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 10.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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