

SSG Series

Features

- 105°C, 1,000 hours assured
- Standard micro miniature size with 5mm height
- RoHS Compliance

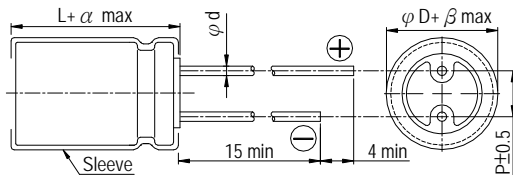


Sleeve & Marking Color: Dark Green & White

Specifications

| Items | Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|------------|--------------------|---|--------------------|-----------------------------------|-----------------|------------------------|------------|-----------|-------------------|--------|----------|------|------|------|------|------|------------|-------------------|------|------|------|------|---|---|---|
| Category Temperature Range | -40°C ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% (at 120Hz, 20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (at 20°C) | I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF V = rated DC working voltage in V | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (Tanδ at 120Hz, 20°C) | <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <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> </tbody> </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) | Impedance ratio shall not exceed the values given in the table below. <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Impedance</td> <td>Z(-25°C)/Z(+20°C)</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>Ratio</td> <td>Z(-40°C)/Z(+20°C)</td> <td>15</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> </tr> </tbody> </table> | Rated Voltage | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | Impedance | Z(-25°C)/Z(+20°C) | 7 | 6 | 4 | 3 | 2 | 2 | 2 | Ratio | Z(-40°C)/Z(+20°C) | 15 | 12 | 8 | 6 | 4 | 4 | 4 |
| Rated Voltage | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | | | |
| Impedance | Z(-25°C)/Z(+20°C) | 7 | 6 | 4 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| Ratio | Z(-40°C)/Z(+20°C) | 15 | 12 | 8 | 6 | 4 | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
| Endurance | <table border="1"> <thead> <tr> <th>Test Time</th> <th>1,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value 4 ~ 6.3V; Within ±25% of initial value 10 ~ 50V</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 1,000 hours at 105°C.</p> | Test Time | 1,000 Hrs | Capacitance Change | Within ±30% of initial value 4 ~ 6.3V; Within ±25% of initial value 10 ~ 50V | Dissipation Factor | 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; Within ±25% of initial value 10 ~ 50V | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | 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 border="1"> <thead> <tr> <th rowspan="2">Cap. (μF)</th> <th colspan="6">Freq. (Hz)</th> </tr> <tr> <th>60 (50)</th> <th>120</th> <th>500</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <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 220</td> <td>0.80</td> <td>1.00</td> <td>1.08</td> <td>1.20</td> <td>1.30</td> </tr> </tbody> </table> | Cap. (μF) | Freq. (Hz) | | | | | | 60 (50) | 120 | 500 | 1k | 10k up | Under 47 | 0.75 | 1.00 | 1.15 | 1.34 | 1.50 | 100 to 220 | 0.80 | 1.00 | 1.08 | 1.20 | 1.30 | | | |
| Cap. (μF) | Freq. (Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 60 (50) | 120 | 500 | 1k | 10k up | | | | | | | | | | | | | | | | | | | | | | | |
| Under 47 | 0.75 | 1.00 | 1.15 | 1.34 | 1.50 | | | | | | | | | | | | | | | | | | | | | | | |
| 100 to 220 | 0.80 | 1.00 | 1.08 | 1.20 | 1.30 | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

| | | | |
|----|------|-----|-----|
| φD | 4 | 5 | 6.3 |
| P | 1.5 | 2.0 | 2.5 |
| φd | 0.45 | | |
| α | 1.0 | | |
| β | 0.5 | | |

Dimension & Permissible Ripple Current

Dimension: φD × L(mm)

Ripple Current: mA/rms at 120 Hz, 105°C

| μF | V. DC Contents | 4V (0G) | | 6.3V (0J) | | 10V (1A) | | 16V (1C) | | 25V (1E) | | 35V (1V) | | 50V (1H) | |
|-----|----------------|---------|----|-----------|----|----------|----|----------|----|----------|----|----------|-----|----------|----|
| | | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA |
| 1 | 010 | | | | | | | | | | | | | 4×5 | 7 |
| 2.2 | 2R2 | | | | | | | | | | | 4×5 | 8.7 | 4×5 | 10 |
| 3.3 | 3R3 | | | | | | | | | 4×5 | 11 | 4×5 | 12 | 4×5 | 13 |
| 4.7 | 4R7 | | | | | | | 4×5 | 14 | 4×5 | 15 | 4×5 | 17 | 5×5 | 20 |
| 10 | 100 | | | | | 4×5 | 14 | 4×5 | 23 | 5×5 | 27 | 5×5 | 27 | 6.3×5 | 31 |
| 22 | 220 | | | 4×5 | 21 | 5×5 | 27 | 5×5 | 30 | 6.3×5 | 42 | 6.3×5 | 46 | 6.3×5 | 46 |
| 33 | 330 | 4×5 | 27 | 5×5 | 30 | 5×5 | 34 | 6.3×5 | 40 | 6.3×5 | 52 | 6.3×5 | 52 | | |
| 47 | 470 | 4×5 | 34 | 5×5 | 36 | 6.3×5 | 43 | 6.3×5 | 48 | 6.3×5 | 58 | | | | |
| 100 | 101 | 5×5 | 50 | 6.3×5 | 56 | 6.3×5 | 70 | | | | | | | | |
| 220 | 221 | 6.3×5 | 74 | | | | | | | | | | | | |