

SGV SERIES

UPGRADE

105°C Standard, Lead Free Reflow Soldering.

◆FEATURES

- Load Life : 105°C 2000~5000hours.
- Lead free reflow soldering is available.
- Available for high density mounting.
- RoHS compliance.



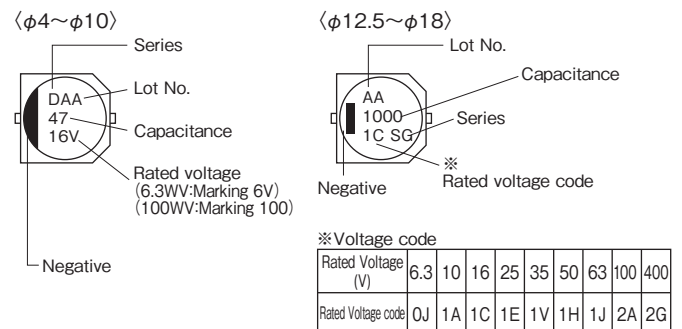
◆SPECIFICATIONS

| Items | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|-------------------|-------------------|--------------------|-----------------------------------|-------------------|-----------------|------|--------------------|--|---------|------|--------------|------------------|------------------------------------|------|------|------|------|------|------|---|---|---|------------------|------|------|------|------|------|------|------|------|------|--|
| | -55~+105°C | -40~+105°C | -25~+105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Category Temperature Range | -55~+105°C | -40~+105°C | -25~+105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3~50V.DC | 63 , 100V.DC | 400V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(20°C,120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current(MAX) | I=0.01CV or 3μA whichever is greater. (After 2 minutes application of rated voltage) I=Leakage Current(μA) C=Capacitance(μF) V=Rated Voltage(V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor(MAX) (tanδ) | <table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>400</th> <th>(20°C,120Hz)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">tanδ</td> <td>φ4,φ5,φ6.3×6.1</td> <td>0.30</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>φ6.3×8,φ8~φ18</td> <td>0.35</td> <td>0.26</td> <td>0.24</td> <td>0.18</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.10</td> <td>0.20</td> </tr> </tbody> </table> <p>When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.</p> | | | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 400 | (20°C,120Hz) | tanδ | φ4,φ5,φ6.3×6.1 | 0.30 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | — | — | — | φ6.3×8,φ8~φ18 | 0.35 | 0.26 | 0.24 | 0.18 | 0.14 | 0.12 | 0.12 | 0.10 | 0.20 | |
| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 400 | (20°C,120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tanδ | φ4,φ5,φ6.3×6.1 | 0.30 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | φ6.3×8,φ8~φ18 | 0.35 | 0.26 | 0.24 | 0.18 | 0.14 | 0.12 | 0.12 | 0.10 | 0.20 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <p>After life test with rated ripple current at conditions stated in the table below at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <thead> <tr> <th></th> <th>Capacitance Change</th> <th>Within ±25% of the initial value.</th> <th>Rated Voltage (V)</th> <th>Life Time (hrs)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> <td>6.3~100</td> <td>2000</td> </tr> <tr> <td></td> <td>Leakage Current</td> <td>Not more than the specified value.</td> <td>400</td> <td>5000</td> </tr> </tbody> </table> | | | | Capacitance Change | Within ±25% of the initial value. | Rated Voltage (V) | Life Time (hrs) | | Dissipation Factor | Not more than 200% of the specified value. | 6.3~100 | 2000 | | Leakage Current | Not more than the specified value. | 400 | 5000 | | | | | | | | | | | | | | | | | | |
| | Capacitance Change | Within ±25% of the initial value. | Rated Voltage (V) | Life Time (hrs) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Dissipation Factor | Not more than 200% of the specified value. | 6.3~100 | 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Leakage Current | Not more than the specified value. | 400 | 5000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Stability Impedance Ratio(MAX) | <table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>400</th> <th>(120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>6</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>8</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>—</td> <td></td> </tr> </tbody> </table> | | | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 400 | (120Hz) | Z(-25°C)/Z(20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | | Z(-40°C)/Z(20°C) | 8 | 8 | 4 | 4 | 3 | 3 | 5 | 5 | — | |
| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 400 | (120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 8 | 8 | 4 | 4 | 3 | 3 | 5 | 5 | — | | | | | | | | | | | | | | | | | | | | | | | | | | | |

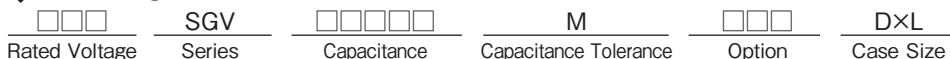
◆MULTIPLIER FOR RIPPLE CURRENT

| Frequency (Hz) | 60(50) | 120 | 500 | 1k | 10k≤ | |
|----------------|-------------|------|------|------|------|------|
| Coefficient | 0.47~1μF | 0.50 | 1.00 | 1.20 | 1.30 | 1.50 |
| | 2.2~4.7μF | 0.65 | 1.00 | 1.20 | 1.30 | 1.50 |
| | 10~47μF | 0.80 | 1.00 | 1.20 | 1.30 | 1.50 |
| | 100~1000μF | 0.80 | 1.00 | 1.10 | 1.15 | 1.20 |
| | 2200~6800μF | 0.80 | 1.00 | 1.05 | 1.10 | 1.15 |

◆MARKING

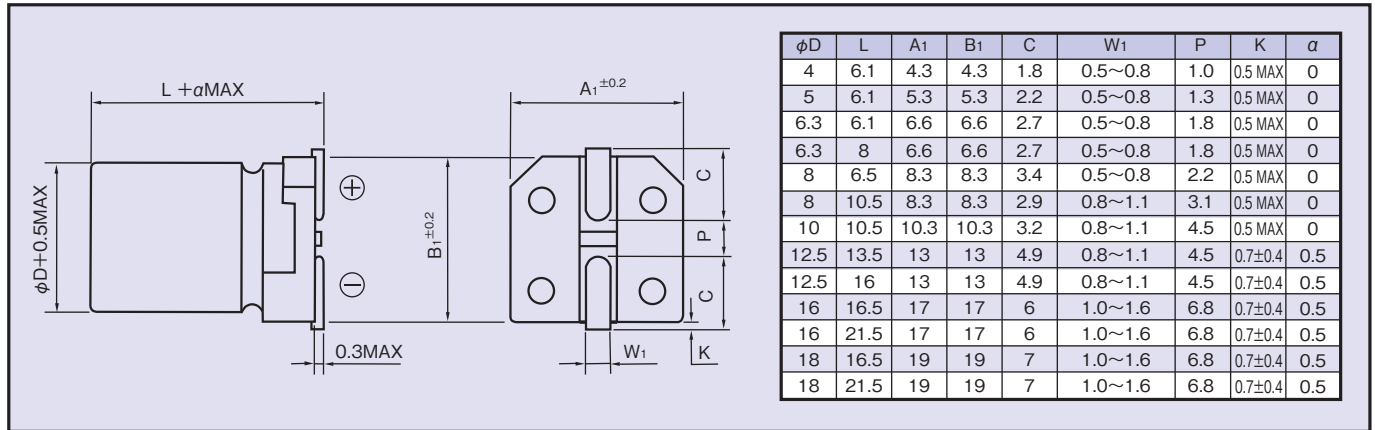


◆PART NUMBER



◆ DIMENSIONS

(mm)


◆ STANDARD SIZE

 Size $\phi D \times L$ (mm), Ripple Current (mA r.m.s./105°C, 120Hz)

| V.DC | Cap (μF) | Size ($\phi D \times L$) | Ripple | V.DC | Cap (μF) | Size ($\phi D \times L$) | Ripple | V.DC | Cap (μF) | Size ($\phi D \times L$) | Ripple | | | |
|----------|-----------------|----------------------------|--------|---------|-----------------|----------------------------|---------|-----------|-----------------|----------------------------|-----------|---------|-------|-------|
| 6.3 (0J) | 22 | 4×6.1 | 26 | 25 (1E) | 33 | 6.3×6.1 | 65 | 63 (1J) | 22 | 8×10.5 | 55 | | | |
| | 33 | 4×6.1 | 29 | | 47 | 6.3×8 | 79 | | 33 | 8×10.5 | 115 | | | |
| | 47 | 5×6.1 | 46 | | 8×6.5 | 91 | 47 | | 8×10.5 | 120 | | | | |
| | 100 | 6.3×6.1 | 71 | | 100 | 8×10.5 | 180 | | 100 | 12.5×16 | 225 | | | |
| | 220 | 6.3×8 | 121 | | 220 | 8×10.5 | 320 | | 220 | 16×16.5 | 385 | | | |
| | 470 | 8×10.5 | 210 | | 10×10.5 | 355 | 330 | | 16×21.5 | 490 | | | | |
| | 1000 | 10×10.5 | 495 | | 12.5×13.5 | 450 | 18×16.5 | | 590 | | | | | |
| | 2200 | 12.5×16 | 750 | | 470 | 10×10.5 | 490 | | 470 | 18×21.5 | 590 | | | |
| | 3300 | 16×21.5 | 930 | | 1000 | 16×21.5 | 700 | | 100 (2A) | 10 | 8×10.5 | 65 | | |
| | 4700 | 18×21.5 | 1200 | | 18×16.5 | 700 | 22 | | | 10×10.5 | 90 | | | |
| 6800 | 18×21.5 | 1350 | 2200 | 18×21.5 | 1050 | 33 | 10×10.5 | 135 | | | | | | |
| 10 (1A) | 33 | 5×6.1 | 43 | 3300 | 18×21.5 | 1700 | 47 | 12.5×13.5 | | 160 | | | | |
| | 100 | 6.3×6.1 | 71 | 35 (1V) | 4.7 | 4×6.1 | 15 | 100 | | 16×16.5 | 285 | | | |
| | 330 | 8×10.5 | 195 | | 10 | 5×6.1 | 28 | 220 | | 16×21.5 | 440 | | | |
| | 470 | 8×10.5 | 210 | | 22 | 6.3×6.1 | 55 | | | 18×16.5 | 440 | | | |
| | 1000 | 10×10.5 | 440 | | 33 | 6.3×8 | 76 | 400 (2G) | | 10 | 12.5×13.5 | 92 | | |
| | 2200 | 12.5×16 | 500 | | 8×6.5 | 84 | 100 | | | 22 | 16×21.5 | 170 | | |
| | 3300 | 16×21.5 | 1000 | | 100 | 8×10.5 | | | | 180 | 33 | 18×21.5 | 238 | |
| | 4700 | 18×21.5 | 1200 | | 10×10.5 | 305 | 220 | | 10×10.5 | 50 (1H) | 0.47 | 4×6.1 | 4 | |
| 16 (1C) | 10 | 4×6.1 | 28 | | 12.5×13.5 | 450 | 330 | | 12.5×16 | | | | | 460 |
| | 22 | 5×6.1 | 39 | | 470 | 16×16.5 | 490 | | 470 | 16×16.5 | 490 | 2.2 | 4×6.1 | 11 |
| | 47 | 6.3×6.1 | 70 | | 50 (1H) | 1000 | 16×21.5 | | 750 | 1000 | 16×21.5 | 750 | 3.3 | 4×6.1 |
| | 100 | 6.3×8 | 111 | 18×16.5 | | | 750 | | 4.7 | | 5×6.1 | 19 | | |
| | 220 | 8×10.5 | 185 | 22 | | 8×10.5 | 180 | | 10 | 6.3×6.1 | 35 | | | |
| | 330 | 8×10.5 | 290 | 220 | | 10×10.5 | 305 | | 22 | 6.3×8 | 67 | | | |
| | | 10×10.5 | 440 | | | 12.5×13.5 | 450 | 8×6.5 | | 70 | | | | |
| | 470 | 8×10.5 | 320 | 330 | | 12.5×16 | 460 | 33 | 8×10.5 | 140 | | | | |
| | | 10×10.5 | 460 | 470 | | 16×16.5 | 490 | | 47 | 8×10.5 | 167 | | | |
| | 1000 | 16×16.5 | 630 | 470 | | 18×16.5 | 750 | 100 | 10×10.5 | 180 | | | | |
| | | 16×21.5 | 930 | | | 1000 | 8×10.5 | | 230 | 220 | 8×10.5 | 230 | | |
| | 2200 | 18×16.5 | 930 | 1000 | | 10×10.5 | 315 | 12.5×16 | 380 | | | | | |
| 18×21.5 | | 1150 | 220 | | 12.5×16 | 380 | 330 | 16×16.5 | 470 | | | | | |
| 3300 | 18×21.5 | 1150 | 1000 | 16×21.5 | 550 | 470 | 16×21.5 | 550 | | | | | | |
| | | | | 18×16.5 | | | 820 | | | | | | | |
| | | | | 18×16.5 | | | | | | | | | | |
| | | | | 18×21.5 | | | | | | | | | | |