

SGV SERIES

UPGRADE

105°C Standard

- Load Life : 105°C 2000~5000 hours.
- AEC-Q200.
- High Temperature Reflow soldering is available. (JGV series)  
([http://www.rubycon.co.jp/catalog/j\\_pdfs/aluminum/j\\_JGV.pdf](http://www.rubycon.co.jp/catalog/j_pdfs/aluminum/j_JGV.pdf))



RoHS compliance



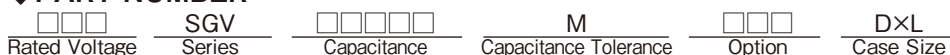
◆ SPECIFICATIONS

| Items  | Characteristics  |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|--|--|--|--|-----------------|------|------|------|------|---------|------|-----|-----|---------|-----|-----|------------------|------|------|------|------|------|------|---|---|---|---|---|------------------|------|------|------|------|------|------|------|------|------|------|
| Category Temperature Range   | -55~+105°C   | -40~+105°C                                 | -25~+105°C   |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Rated Voltage Range  | 6.3~50Vdc  | 63, 100Vdc                                 | 160~450Vdc   |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Capacitance Tolerance  | ±20% (20°C, 120Hz)   |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Leakage Current(MAX)   | 6.3~100Vdc   |  | 160~450Vdc   |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|  | I=0.01CV or 3µA whichever is greater.<br>(After 2 minutes application of rated voltage)  |  | I=0.04CV+100µA (1minute)<br>I=0.02CV+25µA (5minutes) |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|  | I=Leakage Current(µA)    C=Capacitance(µF)    V=Rated Voltage(Vdc)   |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Dissipation Factor(MAX) (tanδ)   | Rated Voltage (Vdc)  |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|  | <table border="1"> <tr> <th></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>160~250</th> <th>400</th> <th>450</th> </tr> <tr> <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> <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>0.15</td> <td>0.20</td> <td>-</td> </tr> </table> |  |  |                 | 6.3  | 10   | 16   | 25   | 35      | 50   | 63  | 100 | 160~250 | 400 | 450 | 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 | 0.15 | 0.20 |
|  | 6.3  | 10   | 16   | 25              | 35   | 50   | 63   | 100  | 160~250 | 400  | 450 |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| 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 | 0.15    | 0.20 | -   |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF. |  |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Endurance  | After applying rated voltage with rated ripple current for specified time at 105°C, the capacitors shall meet the following requirements.  |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|  | Capacitance Change   | Within ±25% of the initial value.          | Rated Voltage (Vdc)                                  | 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.         | 160~450  | 5000            |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Low Temperature Stability Impedance Ratio(MAX)   | Rated Voltage (Vdc)  |  |  |                 |      |      |      |      |         |      |     |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
|  | <table border="1"> <tr> <th></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>160~250</th> <th>400</th> <th>450</th> </tr> <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>3</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> <td>-</td> </tr> </table>  |  |  |                 | 6.3  | 10   | 16   | 25   | 35      | 50   | 63  | 100 | 160~250 | 400 | 450 | Z(-25°C)/Z(20°C) | 4    | 3    | 2    | 2    | 2    | 2    | 2 | 2 | 3 | 6 | - | Z(-40°C)/Z(20°C) | 8    | 8    | 4    | 4    | 3    | 3    | 5    | 5    | -    | -    |
|  | 6.3  | 10   | 16   | 25              | 35   | 50   | 63   | 100  | 160~250 | 400  | 450 |     |         |     |     |                  |      |      |      |      |      |      |   |   |   |   |   |                  |      |      |      |      |      |      |      |      |      |      |
| Z(-25°C)/Z(20°C)   | 4  | 3  | 2  | 2               | 2    | 2    | 2    | 2    | 3       | 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 |
|                | 2.2~6.8µF   | 0.65 | 1.00 | 1.20 | 1.30 | 1.50 |
|                | 10~68µF     | 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 |

◆ PART NUMBER



◆ DIMENSIONS

(mm)

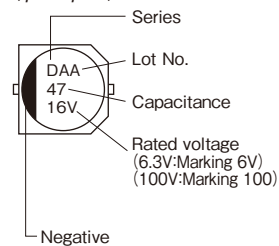
| φD   | L    | A1   | B1   | C   | W1      | P   | K       | α   |
|------|------|------|------|-----|---------|-----|---------|-----|
| 4    | 6.1  | 4.3  | 4.3  | 1.8 | 0.5~0.8 | 1.0 | 0.5 MAX | 0   |
| 5    | 6.1  | 5.3  | 5.3  | 2.2 | 0.5~0.8 | 1.3 | 0.5 MAX | 0   |
| 6.3  | 6.1  | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 | 0.5 MAX | 0   |
| 6.3  | 8    | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 | 0.5 MAX | 0   |
| 8    | 6.5  | 8.3  | 8.3  | 3.4 | 0.5~0.8 | 2.2 | 0.5 MAX | 0   |
| 8    | 10.5 | 8.3  | 8.3  | 2.9 | 0.8~1.1 | 3.1 | 0.5 MAX | ※1  |
| 10   | 10.5 | 10.3 | 10.3 | 3.2 | 0.8~1.1 | 4.5 | 0.5 MAX | ※1  |
| 12.5 | 13.5 | 13   | 13   | 4.9 | 0.8~1.1 | 4.5 | 0.7±0.4 | 0.5 |
| 12.5 | 16   | 13   | 13   | 4.9 | 0.8~1.1 | 4.5 | 0.7±0.4 | 0.5 |
| 16   | 16.5 | 17   | 17   | 6   | 1.0~1.6 | 6.8 | 0.7±0.4 | 0.5 |
| 16   | 21.5 | 17   | 17   | 6   | 1.0~1.6 | 6.8 | 0.7±0.4 | 0.5 |
| 18   | 16.5 | 19   | 19   | 7   | 1.0~1.6 | 6.8 | 0.7±0.4 | 0.5 |
| 18   | 21.5 | 19   | 19   | 7   | 1.0~1.6 | 6.8 | 0.7±0.4 | 0.5 |

※1: α dimensions

| Rated Voltage | α   |
|---------------|-----|
| 6.3~100       | 0   |
| 160~400       | 0.2 |

◆ MARKING

〈φ4~φ10〉



〈φ12.5~φ18〉



※2 Voltage code

| Rated Voltage (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 400 | 450 |
|---------------------|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Rated Voltage code  | 0J  | 1A | 1C | 1E | 1V | 1H | 1J | 2A  | 2C  | 2D  | 2E  | 2G  | 2W  |

**◆ STANDARD SIZE**

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

| Vdc     | Cap ( $\mu$ F) | Size ( $\phi$ DXL) | Ripple  | Vdc     | Cap ( $\mu$ F) | Size ( $\phi$ DXL) | Ripple    | Vdc     | Cap ( $\mu$ F) | Size ( $\phi$ DXL) | Ripple    |         |         |
|---------|----------------|--------------------|---------|---------|----------------|--------------------|-----------|---------|----------------|--------------------|-----------|---------|---------|
| 6.3     | 22             | 4×6.1              | 26      | 35      | 4.7            | 4×6.1              | 15        | 160     | 12             | 8×10.5             | 115       |         |         |
|         | 33             | 4×6.1              | 29      |         | 10             | 5×6.1              | 28        |         | 22             | 10×10.5            | 150       |         |         |
|         | 47             | 5×6.1              | 46      |         | 22             | 6.3×6.1            | 55        |         | 39             | 12.5×13.5          | 250       |         |         |
|         | 100            | 6.3×6.1            | 71      |         | 33             | 6.3×8              | 76        |         | 47             | 12.5×16            | 310       |         |         |
|         | 220            | 6.3×8              | 121     |         |                | 8×6.5              | 84        |         | 68             | 16×16.5            | 400       |         |         |
|         | 470            | 8×10.5             | 210     |         | 100            | 8×10.5             | 180       |         | 100            | 18×16.5            | 480       |         |         |
|         | 1000           | 10×10.5            | 495     |         |                | 10×10.5            | 305       |         | 120            | 16×21.5            | 560       |         |         |
|         |                | 12.5×13.5          |         |         | 220            | 10×10.5            | 450       |         | 150            | 18×21.5            | 690       |         |         |
|         | 2200           | 12.5×16            | 750     |         |                | 12.5×13.5          |           |         | 330            | 12.5×16            | 460       |         |         |
|         | 10             | 3300               | 16×21.5 |         | 930            | 470                | 16×16.5   |         | 490            | 200                | 10        | 8×10.5  | 100     |
| 18×16.5 |                |                    | 1000    | 16×21.5 |                | 750                | 15        | 10×10.5 | 130            |                    |           |         |         |
| 4700    |                | 18×21.5            |         | 1200    | 33             |                    | 12.5×13.5 | 230     |                |                    |           |         |         |
| 6800    |                | 18×21.5            | 1350    | 18×16.5 | 18×16.5        | 42                 | 12.5×16   | 270     |                |                    |           |         |         |
| 16      | 33             | 5×6.1              | 43      | 50      | 0.47           | 4×6.1              | 4         | 250     | 6.8            | 8×10.5             | 85        |         |         |
|         | 100            | 6.3×6.1            | 71      |         | 1              | 4×6.1              | 8         |         | 12             | 10×10.5            | 115       |         |         |
|         | 330            | 8×10.5             | 195     |         | 2.2            | 4×6.1              | 11        |         | 22             | 12.5×13.5          | 190       |         |         |
|         | 470            | 8×10.5             | 210     |         | 3.3            | 4×6.1              | 14        |         | 33             | 12.5×16            | 240       |         |         |
|         |                | 10×10.5            | 440     |         | 4.7            | 5×6.1              | 19        |         | 47             | 16×16.5            | 320       |         |         |
|         | 1000           | 12.5×16            | 500     |         | 10             | 6.3×6.1            | 35        |         | 56             | 18×16.5            | 400       |         |         |
|         | 2200           | 16×16.5            | 810     |         | 22             | 6.3×8              | 67        |         | 68             | 18×16.5            | 440       |         |         |
|         | 3300           | 16×21.5            | 1000    |         |                | 8×6.5              | 70        |         | 100            | 16×21.5            | 500       |         |         |
|         |                | 18×16.5            |         |         | 33             | 8×10.5             | 140       |         | 120            | 18×21.5            | 620       |         |         |
|         | 4700           | 18×21.5            | 1200    |         |                | 47                 | 8×10.5    |         | 167            | 400                | 6.8       | 8×10.5  | 45      |
| 25      | 10             | 4×6.1              | 28      | 47      | 10×10.5        | 180                | 4.7       | 10×10.5 | 75             |                    |           |         |         |
|         | 22             | 5×6.1              | 39      |         | 100            | 8×10.5             | 230       | 10      | 12.5×13.5      |                    | 135       |         |         |
|         | 47             | 6.3×6.1            | 70      | 100     | 10×10.5        | 315                | 12        | 12.5×16 | 165            |                    |           |         |         |
|         | 100            | 6.3×8              | 111     |         | 220            | 12.5×16            | 380       | 18      | 16×16.5        |                    | 220       |         |         |
|         | 220            | 8×10.5             | 185     | 330     | 16×16.5        | 470                | 22        | 18×16.5 | 280            |                    |           |         |         |
|         | 330            | 8×10.5             | 290     | 470     | 16×21.5        | 550                | 33        | 16×21.5 | 320            |                    |           |         |         |
|         |                | 10×10.5            | 440     |         | 1000           |                    | 18×21.5   | 820     | 47             |                    | 18×21.5   | 400     |         |
|         | 470            | 8×10.5             | 320     | 63      | 22             | 8×10.5             | 55        | 450     | 6.8            |                    | 12.5×13.5 | 110     |         |
|         |                | 10×10.5            | 460     |         | 33             | 8×10.5             | 115       |         | 8.2            |                    | 12.5×16   | 150     |         |
|         | 1000           | 16×16.5            | 630     |         | 47             | 8×10.5             | 120       |         | 12             | 16×16.5            | 195       |         |         |
| 2200    | 16×21.5        | 930                | 100     |         | 12.5×16        | 225                | 18        |         | 18×16.5        | 245                |           |         |         |
|         | 18×16.5        |                    | 220     |         | 16×16.5        | 385                | 22        |         | 16×21.5        | 275                |           |         |         |
| 3300    | 18×21.5        | 1150               | 330     |         | 16×21.5        | 490                | 27        |         | 18×21.5        | 345                |           |         |         |
| 6.3     | 33             | 6.3×6.1            | 65      |         | 18×16.5        |                    | 590       |         | 100            | 10                 | 8×10.5    | 65      |         |
|         |                | 6.3×8              |         |         | 79             | 470                |           |         |                | 18×21.5            | 22        | 10×10.5 | 90      |
|         | 47             | 8×6.5              | 91      |         |                | 100                | 10        |         |                | 8×10.5             | 65        | 33      | 10×10.5 |
|         |                | 8×10.5             |         |         | 180            |                    | 47        |         |                | 12.5×13.5          | 160       |         |         |
|         | 100            | 8×10.5             | 320     | 100     | 16×16.5        |                    | 285       |         |                |                    |           |         |         |
|         |                | 10×10.5            |         | 355     | 220            |                    | 16×21.5   | 440     |                |                    |           |         |         |
|         | 220            | 10×10.5            | 450     | 18×16.5 |                |                    | 18×16.5   |         |                |                    |           |         |         |
|         |                | 10×10.5            |         | 490     | 10             |                    | 8×10.5    | 65      |                |                    |           |         |         |
|         | 330            | 10×10.5            | 700     | 22      | 10×10.5        |                    | 90        |         |                |                    |           |         |         |
|         |                | 12.5×13.5          |         | 1000    | 33             |                    | 10×10.5   | 135     |                |                    |           |         |         |
| 470     | 16×21.5        | 1050               | 47      |         | 12.5×13.5      |                    | 160       |         |                |                    |           |         |         |
|         | 18×16.5        |                    | 2200    | 100     | 16×16.5        |                    | 285       |         |                |                    |           |         |         |
| 1000    | 18×21.5        | 1700               |         | 220     | 16×21.5        | 440                |           |         |                |                    |           |         |         |
|         | 18×21.5        |                    |         |         |                |                    |           |         |                |                    |           |         |         |

# Mouser Electronics

Authorized Distributor

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[400SGV2R7M8X10.5](#) [50SGV3R3M4X6.1](#) [6.3SGV1000M12.5X13.5](#) [200SGV15M10X10.5](#) [250SGV12M10X10.5](#)  
[250SGV33M12.5X16](#) [25SGV100M8X10.5](#) [35SGV1000M16X21.5](#) [35SGV22M6.3X6.1](#) [25SGV3300M18X21.5](#)  
[35SGV470M16X16.5](#) [35SGV4R7M4X6.1](#) [450SGV6R8M12.5X13.5](#) [63SGV220M16X16.5](#) [10SGV100M6.3X6.1](#)  
[100SGV22M10X10.5](#) [160SGV22M10X10.5](#) [16SGV330M10X10.5](#) [200SGV68M18X16.5](#) [25SGV220M10X10.5](#)  
[25SGV220M8X10.5](#) [63SGV22M8X10.5](#) [35SGV100M10X10.5](#) [35SGV10M5X6.1](#) [50SGV220M12.5X16](#)  
[50SGV22M8X6.5](#) [6.3SGV3300M16X21.5](#) [6.3SGV470M8X10.5](#) [63SGV330M16X21.5](#) [63SGV33M8X10.5](#)  
[6.3SGV6800M18X21.5](#) [6.3SGV47M5X6.1](#) [63SGV100M12.5X16](#) [50SGV0R47M4X6.1](#) [50SGV470M18X16.5](#)  
[50SGV47M10X10.5](#) [50SGV47M8X10.5](#) [50SGV4R7M5X6.1](#) [6.3SGV33M4X6.1](#) [25SGV2200M18X21.5](#)  
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[16SGV330M8X10.5](#) [50SGV2R2M4X6.1](#) [6.3SGV100M6.3X6.1](#) [63SGV330M18X16.5](#) [200SGV100M16X21.5](#)  
[250SGV6R8M8X10.5](#) [35SGV220M10X10.5](#) [6.3SGV4700M18X21.5](#) [63SGV470M18X21.5](#) [6.3SGV2200M12.5X16](#)  
[6.3SGV220M6.3X8](#) [6.3SGV22M4X6.1](#) [63SGV47M8X10.5](#) [16SGV470M8X10.5](#) [200SGV42M12.5X16](#)  
[25SGV33M6.3X6.1](#) [400SGV33M18X21.5](#) [450SGV18M18X16.5](#) [6.3SGV1000M10X10.5](#) [450SGV15M16X16.5](#)  
[35SGV1000M18X16.5](#) [35SGV100M8X10.5](#) [400SGV15M12.5X16](#) [450SGV10M12.5X16](#) [50SGV22M6.3X8](#)  
[400SGV27M18X16.5](#) [50SGV100M10X10.5](#) [50SGV10M6.3X6.1](#) [400SGV10M12.5X13.5](#) [400SGV22M16X16.5](#)  
[35SGV220M12.5X13.5](#) [50SGV33M8X10.5](#) [50SGV470M16X21.5](#) [400SGV33M16X21.5](#) [450SGV22M16X21.5](#)  
[6.3SGV3300M18X16.5](#) [35SGV330M12.5X16](#) [25SGV470M10X10.5](#) [200SGV33M12.5X13.5](#) [200SGV56M16X16.5](#)  
[250SGV22M12.5X13.5](#) [25SGV1000M18X16.5](#) [250SGV100M18X21.5](#) [25SGV47M8X6.5](#) [16SGV1000M16X16.5](#)