# SGV Series

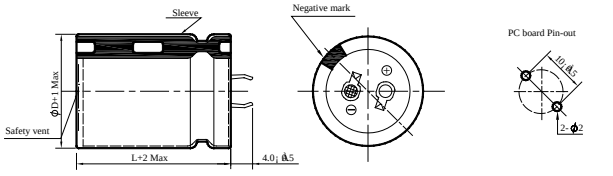
- **High ripple current**
- **Load life 5,000 hours at 85 ℃**

## ◆ SPECIFICATIONS

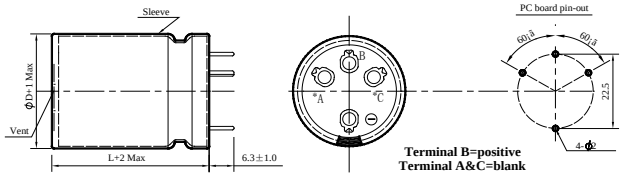
| Item | Performance Characteristics |
|---|---|
| Category Temperature Range | -25 ~ +85℃ |
| Working Voltage Range | 200 ~ 500Vdc |
| Capacitance Range | 56 ~ 2200 μF |
| Capacitance Tolerance | ±20% (at 25℃ and 120Hz) |
| Dissipation Factor (tanδ) (at 25℃, 120Hz) | Rated Voltage (V) \| 200 ~ 450 \| 500<br>tanδ(Max) \| 0.15 \| 0.20<br>The above values should be increased by 0.02 for every additional 1000μF |
| Leakage Current | I=0.02CV or 3000μA,whichever is smaller<br>I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V)<br>Impress the rated voltage for 5 minutes. |
| Endurance | The following requirements shall be satisfied when the capacitor are restored to 25℃ after the rated voltage applied for 5,000 hours at 85℃.<br>Capacitance change \| ≦ ±20% of the initial value<br>Dissipation factor(tanδ) \| ≦ 200% of the specified value<br>Leakage current \| ≦ specified value |
| Shelf Life | The following requirements shall be satisfied when the capacitor are restored to 25℃ after exposing them for 1,000 hours at 85℃ without voltage applied.<br>Capacitance change \| ≦ ±20% of the initial value<br>Dissipation factor(tanδ) \| ≦ 200% of the specified value<br>Leakage current \| ≦ 200% of the specified value |
| Others | Conforms to JIS-C-5101-4 (1998), characteristic W. |

## ◆ DIMENSIONS (mm)

**Terminal Code : ND : Standard**




**Terminal Code :K6 (ø35)**




## ◆ PART NUMBERING SYSTEM( Example : 420V 560μF )

| S | G | V | 2 | S | 5 | 6 | 1 | M | N | D | 3 | 5 | 5 | 0 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Special Request
Size code(3550 : 35×50)
Terminal length code
Lead forming Type code
Capacitance tolerance code(M:±20%)
Capacitance code(560μF)
Voltage code(420V)
Series code (SGV)

# SGV Series

◆ **Case size & Permissible rated ripple current (mA rms) at 85℃ / 120Hz:**

| Vdc / ΦD / uF | 200 | | | | | | | | Vdc / ΦD / uF | 220 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | | | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | |
| | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC |
| 270 | 22×25 | 1240 | | | | | | | 220 | 22×25 | 1265 | | | | | | |
| 330 | 22×30 | 1450 | 25×25 | 1450 | | | | | 270 | 22×25 | 1390 | 25×25 | 1390 | | | | |
| 390 | 22×30 | 1500 | 25×30 | 1500 | | | | | 330 | 22×30 | 1530 | 25×25 | 1530 | | | | |
| 470 | 22×35 | 1760 | 25×30 | 1760 | 30×25 | 1760 | | | 390 | 22×35 | 1800 | 25×30 | 1800 | 30×25 | 1800 | | |
| 560 | 22×40 | 2050 | 25×35 | 2050 | 30×25 | 2050 | | | 470 | 22×40 | 1910 | 25×35 | 1910 | 30×25 | 1910 | | |
| 680 | 22×45 | 2500 | 25×40 | 2500 | 30×30 | 2500 | 35×25 | 2500 | 560 | 22×45 | 2200 | 25×40 | 2200 | 30×30 | 2200 | 35×25 | 2200 |
| 820 | | | 25×45 | 2740 | 30×35 | 2740 | 35×25 | 2740 | 680 | 22×50 | 2530 | 25×45 | 2530 | 30×35 | 2530 | 35×25 | 2530 |
| 1000 | | | 25×50 | 2985 | 30×40 | 2985 | 35×30 | 2985 | 820 | | | 25×50 | 2810 | 30×40 | 2810 | 35×30 | 2810 |
| 1200 | | | | | 30×45 | 3300 | 35×35 | 3300 | 1000 | | | | | 30×45 | 3050 | 35×35 | 3050 |
| 1500 | | | | | 30×50 | 3770 | 35×40 | 3770 | 1200 | | | | | 30×50 | 3375 | 35×40 | 3375 |
| 1800 | | | | | | | 35×45 | 3870 | 1500 | | | | | | | 35×45 | 3830 |
| 2200 | | | | | | | 35×50 | 4150 | 1800 | | | | | | | 35×50 | 3920 |

| Vdc / ΦD / uF | 250 | | | | | | | | Vdc / ΦD / uF | 400 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | | | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | |
| | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC |
| 180 | 22×25 | 1100 | | | | | | | 82 | 22×25 | 770 | | | | | | |
| 220 | 22×25 | 1300 | | | | | | | 100 | 22×30 | 920 | 25×25 | 920 | | | | |
| 270 | 22×30 | 1450 | 25×25 | 1450 | | | | | 120 | 22×35 | 1090 | 25×25 | 1090 | | | | |
| 330 | 22×35 | 1610 | 25×30 | 1610 | 30×25 | 1610 | | | 150 | 22×40 | 1210 | 25×30 | 1210 | 30×25 | 1210 | | |
| 390 | 22×40 | 1890 | 25×35 | 1890 | 30×25 | 1890 | | | 180 | 22×45 | 1430 | 25×35 | 1430 | 30×30 | 1430 | 35×25 | 1430 |
| 470 | 22×45 | 2050 | 25×35 | 2050 | 30×30 | 2050 | 35×25 | 2050 | 220 | 22×45 | 1650 | 25×40 | 1650 | 30×30 | 1650 | 35×25 | 1650 |
| 560 | 22×50 | 2270 | 25×40 | 2270 | 30×35 | 2270 | 35×25 | 2270 | 270 | 22×50 | 1745 | 25×45 | 1745 | 30×35 | 1745 | 35×30 | 1745 |
| 680 | | | 25×50 | 2545 | 30×40 | 2545 | 35×30 | 2545 | 330 | | | 25×50 | 1940 | 30×40 | 1940 | 35×30 | 1940 |
| 820 | | | | | 30×45 | 2950 | 35×35 | 2950 | 390 | | | | | 30×45 | 2180 | 35×35 | 2180 |
| 1000 | | | | | 30×50 | 3200 | 35×40 | 3200 | 470 | | | | | 30×50 | 2460 | 35×40 | 2460 |
| 1200 | | | | | | | 35×45 | 3450 | 560 | | | | | | | 35×45 | 2630 |
| 1500 | | | | | | | 35×50 | 4000 | 680 | | | | | | | 35×50 | 3060 |

| Vdc / ΦD / uF | 420 | | | | | | | | Vdc / ΦD / uF | 450 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | | | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | |
| | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC |
| 68 | 22×25 | 750 | | | | | | | 56 | 22×25 | 495 | | | | | | |
| 82 | 22×25 | 775 | 25×25 | 775 | | | | | 68 | 22×25 | 770 | | | | | | |
| 100 | 22×30 | 965 | 25×25 | 965 | | | | | 82 | 22×30 | 810 | 25×25 | 810 | | | | |
| 120 | 22×35 | 1095 | 25×25 | 1095 | 30×25 | 1095 | | | 100 | 22×35 | 980 | 25×25 | 980 | | | | |
| 150 | 22×40 | 1260 | 25×30 | 1260 | 30×25 | 1260 | 35×25 | 1260 | 120 | 22×40 | 1120 | 25×30 | 1120 | 30×25 | 1120 | | |
| 180 | 22×45 | 1430 | 25×35 | 1430 | 30×30 | 1430 | 35×25 | 1430 | 150 | 22×45 | 1330 | 25×35 | 1330 | 30×30 | 1330 | 35×25 | 1330 |
| 220 | 22×50 | 1680 | 25×40 | 1680 | 30×35 | 1680 | 35×25 | 1680 | 180 | 22×50 | 1500 | 25×40 | 1500 | 30×35 | 1500 | 35×25 | 1500 |
| 270 | | | 25×45 | 1810 | 30×40 | 1810 | 35×30 | 1810 | 220 | | | 25×50 | 1740 | 30×40 | 1740 | 35×30 | 1740 |
| 330 | | | 25×50 | 1950 | 30×45 | 1950 | 35×35 | 1950 | 270 | | | | | 30×45 | 1905 | 35×35 | 1905 |
| 390 | | | | | 30×50 | 2250 | 35×40 | 2250 | 330 | | | | | 30×50 | 1995 | 35×40 | 1995 |
| 470 | | | | | | | 35×45 | 2520 | 390 | | | | | | | 35×45 | 2310 |
| 560 | | | | | | | 35×50 | 2700 | 470 | | | | | | | 35×50 | 2640 |

# SGV Series

◆ **Case size & Permissible rated ripple current (mA rms) at 85℃ / 120Hz:**

| Vdc / ΦD / uF | 500 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Φ 22 | | Φ 25 | | Φ30 | | Φ35 | |
| | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC | ΦD×L | RC |
| 56 | 22×25 | 595 | | | | | | |
| 68 | 22×30 | 630 | 25×25 | 630 | | | | |
| 82 | 22×35 | 805 | 25×25 | 805 | | | | |
| 100 | 22×40 | 900 | 25×30 | 900 | 30×25 | 900 | | |
| 120 | 22×45 | 985 | 25×35 | 985 | 30×30 | 985 | 35×25 | 985 |
| 150 | 22×50 | 1350 | 25×40 | 1350 | 30×30 | 1350 | 35×25 | 1350 |
| 180 | | | 25×45 | 1400 | 30×35 | 1400 | 35×30 | 1400 |
| 220 | | | 25×50 | 1720 | 30×40 | 1720 | 35×30 | 1720 |
| 270 | | | | | 30×45 | 1865 | 35×35 | 1865 |
| 330 | | | | | 30×50 | 2030 | 35×40 | 2030 |
| 390 | | | | | | | 35×45 | 2225 |
| 470 | | | | | | | 35×50 | 2510 |

◆ **RIPPLE CURRENT MULTIPLIERS**

**Frequency Multipliers**

| Vdc | Frequency (Hz) | | | | |
|---|---|---|---|---|---|
| | 50/60 | 120 | 1K | 10K | 100K |
| 200 ~ 250 | 0.80 | 1.00 | 1.15 | 1.17 | 1.20 |
| 400 ~ 500 | 0.90 | 1.00 | 1.10 | 1.12 | 1.15 |