

## SVV series

sales016@heyuecap.com

- Low ESR, Anti-vibration, Peak acceleration: 30G
- High Voltage, Long Life.
- 105°C, 5,000~10,000hrs.
- RoHS Compliant.
- For high reliability applications. (Automotive equipment, Base station equipment, etc.)



SVV

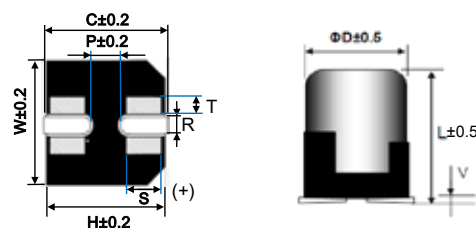
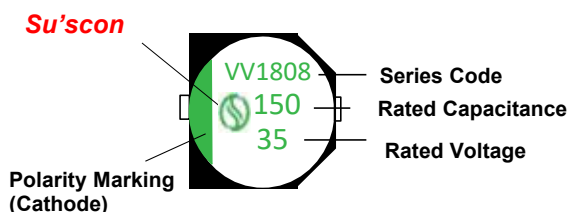
## SPECIFICATIONS

| Items                      | Conditions                                                                                                                                                                                                           | Characteristics                                                                                                                                                |                                       |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Category Temperature Range | —                                                                                                                                                                                                                    | -55 to +105°C                                                                                                                                                  |                                       |
| Rated Voltage Range        | —                                                                                                                                                                                                                    | 16 ~ 125V                                                                                                                                                      |                                       |
| Capacitance Tolerance      | at 20°C, 120HZ                                                                                                                                                                                                       | ±20%(M)                                                                                                                                                        |                                       |
| Surge Voltage              | at 15~35°C                                                                                                                                                                                                           | Rated voltage ×1.15V                                                                                                                                           |                                       |
| Leakage Current            | at 20°C after 2 minutes                                                                                                                                                                                              | I ≤ 0.01CV or 3(μA) Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list |                                       |
| Dissipation Factor (tan δ) | at 20°C, 120Hz                                                                                                                                                                                                       | Please see the attached characteristics list                                                                                                                   |                                       |
| Endurance                  | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 5,000 to 10,000 hours at 105°C, Φ6.3=5,000hrs, D≥Φ8=10,000hrs                        | Appearance                                                                                                                                                     | No significant damage.                |
|                            |                                                                                                                                                                                                                      | Capacitance change                                                                                                                                             | ±30% of the initial value.            |
|                            |                                                                                                                                                                                                                      | DF(tanδ)                                                                                                                                                       | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | ESR                                                                                                                                                            | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | Leakage current                                                                                                                                                | ≤The initial specified value.         |
| Damp Heat (Steady State)   | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to subjecting them to store at 60°C, 90 to 95% RH for 1,000 hours, without DC applied.                | Appearance                                                                                                                                                     | No significant damage.                |
|                            |                                                                                                                                                                                                                      | Capacitance change                                                                                                                                             | ±30% of the initial value.            |
|                            |                                                                                                                                                                                                                      | DF(tanδ)                                                                                                                                                       | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | ESR                                                                                                                                                            | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | Leakage current                                                                                                                                                | ≤The initial specified value.         |
| Surge Voltage              | The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 15~35°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds | Appearance                                                                                                                                                     | No significant damage.                |
|                            |                                                                                                                                                                                                                      | Capacitance change                                                                                                                                             | ±30% of the initial value.            |
|                            |                                                                                                                                                                                                                      | DF(tanδ)                                                                                                                                                       | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | ESR                                                                                                                                                            | ≤200% of the initial specified value. |
|                            |                                                                                                                                                                                                                      | Leakage current                                                                                                                                                | ≤The initial specified value.         |
| Standards                  | IEC 60384-4 (JIS C 5101-4)                                                                                                                                                                                           |                                                                                                                                                                |                                       |

※ Note: If any doubt arises, measure the leakage current after following voltage treatment.

Voltage treatment: DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

## MARKING AND DIMENSIONS



(Unit:mm)

| Size    | D±0.5 | L±0.5 | W±0.2 | H±0.2 | C±0.2 | R        | P±0.2 | V <sub>max</sub> |
|---------|-------|-------|-------|-------|-------|----------|-------|------------------|
| 6.3×6.0 | 6.3   | 6.0   | 6.6   | 6.6   | 7.3   | 0.5to0.8 | 2.1   | 0.3              |
| 6.3×8.0 | 6.3   | 8.0   | 6.6   | 6.6   | 7.3   | 0.5to0.8 | 2.1   | 0.3              |
| 8×10.5  | 8     | 10.5  | 8.3   | 8.3   | 9.0   | 1.0to1.4 | 3.2   | 0.3              |
| 10×10.5 | 10    | 10.5  | 10.3  | 10.3  | 11.0  | 1.0to1.4 | 4.5   | 0.3              |
| 10×12.5 | 10    | 12.5  | 10.3  | 10.3  | 11.0  | 1.0to1.4 | 4.5   | 0.3              |

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## STANDARD RATINGS

| Rated voltage (S.V.) | Cap (μF) | Size Code DxL | Leakage current (μA) max. | ESR (mΩ) max. 100k to 300kHz / 20°C | Rated Ripple Current (mA rms) 100kHz / 105°C | D.F. (tanδ) max. 120Hz / 20°C |
|----------------------|----------|---------------|---------------------------|-------------------------------------|----------------------------------------------|-------------------------------|
| 16 (18.4)            | 82       | 6.3x6.0       | 13                        | 55                                  | 1380                                         | 0.16                          |
|                      | 120      | 6.3x8.0       | 19                        | 40                                  | 1500                                         | 0.16                          |
|                      | 270      | 8x10.5        | 43                        | 26                                  | 2000                                         | 0.16                          |
|                      | 470      | 10x10.5       | 75                        | 21                                  | 2600                                         | 0.16                          |
|                      | 560      | 10x12.5       | 90                        | 15                                  | 3000                                         | 0.16                          |
| 25 (28.8)            | 47       | 6.3x6.0       | 12                        | 60                                  | 1270                                         | 0.16                          |
|                      | 68       | 6.3x8.0       | 17                        | 45                                  | 1400                                         | 0.16                          |
|                      | 150      | 8x10.5        | 38                        | 27                                  | 1900                                         | 0.16                          |
|                      | 270      | 10x10.5       | 68                        | 22                                  | 2500                                         | 0.16                          |
|                      | 330      | 10x12.5       | 83                        | 16                                  | 2900                                         | 0.16                          |
| 35 (40.3)            | 27       | 6.3x6.0       | 9                         | 100                                 | 1080                                         | 0.16                          |
|                      | 47       | 6.3x8.0       | 16                        | 60                                  | 1300                                         | 0.16                          |
|                      | 100      | 8x10.5        | 35                        | 30                                  | 1800                                         | 0.16                          |
|                      | 150      | 10x10.5       | 53                        | 23                                  | 2400                                         | 0.16                          |
|                      | 220      | 10x12.5       | 77                        | 17                                  | 2800                                         | 0.16                          |
| 40 (46.0)            | 18       | 6.3x6.0       | 7                         | 110                                 | 1030                                         | 0.16                          |
|                      | 27       | 6.3x8.0       | 11                        | 70                                  | 1200                                         | 0.16                          |
|                      | 56       | 8x10.5        | 22                        | 32                                  | 1700                                         | 0.16                          |
|                      | 100      | 10x10.5       | 40                        | 24                                  | 2400                                         | 0.16                          |
|                      | 120      | 10x12.5       | 48                        | 18                                  | 2700                                         | 0.16                          |
| 50 (57.5)            | 10       | 6.3x6.0       | 5                         | 120                                 | 980                                          | 0.16                          |
|                      | 15       | 6.3x8.0       | 8                         | 80                                  | 1200                                         | 0.16                          |
|                      | 33       | 8x10.5        | 17                        | 35                                  | 1600                                         | 0.16                          |
|                      | 47       | 8x10.5        | 17                        | 35                                  | 1600                                         | 0.16                          |
|                      | 56       | 10x10.5       | 28                        | 25                                  | 2300                                         | 0.16                          |
|                      | 82       | 10x12.5       | 41                        | 19                                  | 2600                                         | 0.16                          |
| 63 (72.5)            | 6.8      | 6.3x6.0       | 4                         | 150                                 | 960                                          | 0.16                          |
|                      | 10       | 6.3x8.0       | 6                         | 100                                 | 1000                                         | 0.16                          |
|                      | 22       | 8x10.5        | 14                        | 40                                  | 1500                                         | 0.16                          |
|                      | 33       | 8x10.5        | 21                        | 40                                  | 1500                                         | 0.16                          |
|                      |          | 10x10.5       | 21                        | 30                                  | 2100                                         | 0.16                          |
|                      | 47       | 10x10.5       | 30                        | 30                                  | 2100                                         | 0.16                          |
|                      | 56       | 10x12.5       | 35                        | 22                                  | 2400                                         | 0.16                          |
| 80 (92.0)            | 12       | 10x10.5       | 10                        | 70                                  | 1600                                         | 0.16                          |
|                      | 15       | 10x10.5       | 12                        | 70                                  | 1600                                         | 0.16                          |
|                      | 18       | 10x12.5       | 14                        | 50                                  | 1800                                         | 0.16                          |
| 100 (115.0)          | 10       | 10x10.5       | 10                        | 80                                  | 1400                                         | 0.16                          |
|                      | 12       | 10x10.5       | 12                        | 80                                  | 1400                                         | 0.16                          |
|                      | 15       | 10x12.5       | 15                        | 60                                  | 1600                                         | 0.16                          |
| 125 (143.8)          | 10       | 10x10.5       | 13                        | 90                                  | 1200                                         | 0.16                          |

## Frequency Coefficient of Permissible Ripple Current

| Frequency (Hz) / Capacitance (μF) | 100 ≤ F < 1K | 1K ≤ F < 10K | 10K ≤ F < 100K | 100K ≤ F |
|-----------------------------------|--------------|--------------|----------------|----------|
| 4.7 < C ≤ 33                      | 0.05         | 0.32         | 0.67           | 1.00     |
| 33 < C                            | 0.10         | 0.35         | 0.70           | 1.00     |