

Chip Type, 105°C Use, Low Impedance Capacitors

GREEN CAP

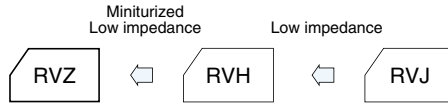
SMD

Low Impedance

105°C 2000hours

Anti-cleaning solvent

- Compatible with surface mounting.
- Supplied with carrier taping.
- Guarantees 2000 hours at 105°C.



Marking color : Black print (ø4x5.3L – ø8x6.5L)  
White print on a brown sleeve (ø8x10L · ø10x10L)

Specifications

| Item  | Performance   |   |      |      |      |      |
|---|---|---|------|------|------|------|
| Category temperature range (°C)               | -55 to +105   |   |      |      |      |      |
| Tolerance at rated capacitance (%)            | ±20 (20°C,120Hz)  |   |      |      |      |      |
| Leakage current (µA)                          | Less than 0.01CV or 3 whichever is larger (after 2 minutes) C: Rated capacitance(µF); V: Rated voltage(V) (20°C)                      |   |      |      |      |      |
| Tangent of loss angle (tanδ)                  | Rated voltage (V)   | 6.3   | 10   | 16   | 25   | 35   |
|   | tanδ (max.)   | 0.28  | 0.24 | 0.20 | 0.16 | 0.14 |
| Characteristics at high and low temperature   | Impedance ratio (max.)  | Z-25°C / Z+20°C                             | 4    | 3    | 2    | 2    |
|   |   | Z-55°C / Z+20°C                             | 8    | 5    | 4    | 3    |
| Endurance (105°C)<br>(Applied ripple current) | Test time   | 2000 hours (8x6.5 or less: 1000 hours)      |      |      |      |      |
|   | Leakage current   | The initial specified value or less         |      |      |      |      |
|   | Percentage of capacitance change  | Within ±25% of initial value                |      |      |      |      |
|   | Tangent of the loss angle   | 200% or less of the initial specified value |      |      |      |      |
| Shelf life (105°C)                            | Test time : 1000 hours; other items are the same as those for the endurance. Voltage application treatment : According to JIS C5101-1 |   |      |      |      |      |
| Applicable standards                          | JIS C5101-1, -18 1998 (IEC 60384-1 1992, -18 1993)  |   |      |      |      |      |

Outline Drawing

Unit: mm

( ): Reference size

| φD  | L        | A    | B    | C   | W          | P   | Casing symbol |
|-----|----------|------|------|-----|------------|-----|---------------|
| 4   | 5.3±0.2  | 4.3  | 4.3  | 2.0 | 0.5 to 0.8 | 1.0 | D55           |
| 4   | 5.8±0.3  | 4.3  | 4.3  | 2.0 | 0.5 to 0.8 | 1.0 | D61           |
| 5   | 5.3±0.2  | 5.3  | 5.3  | 2.3 | 0.5 to 0.8 | 1.5 | E55           |
| 5   | 5.8±0.3  | 5.3  | 5.3  | 2.3 | 0.5 to 0.8 | 1.5 | E61           |
| 6.3 | 5.3±0.2  | 6.6  | 6.6  | 2.7 | 0.5 to 0.8 | 2.0 | F55           |
| 6.3 | 5.8±0.3  | 6.6  | 6.6  | 2.7 | 0.5 to 0.8 | 2.0 | F61           |
| 6.3 | 7.7±0.3  | 6.6  | 6.6  | 2.7 | 0.5 to 0.8 | 2.0 | F80           |
| 8   | 6.5±0.3  | 8.4  | 8.4  | 3.4 | 0.5 to 0.8 | 2.3 | G68           |
| 8   | 10±0.5   | 8.4  | 8.4  | 3.0 | 0.7 to 1.1 | 3.1 | G10           |
| 8   | 10.5±0.5 | 8.4  | 8.4  | 3.0 | 0.7 to 1.1 | 3.1 | GA5           |
| 10  | 10±0.5   | 10.4 | 10.4 | 3.3 | 0.7 to 1.1 | 4.7 | H10           |
| 10  | 10.5±0.5 | 10.4 | 10.4 | 3.3 | 0.7 to 1.1 | 4.7 | HA5           |

Coefficient of Frequency for Rated Ripple Current

| Frequency(Hz)    | 120 | 1k   | 10k | 100k |
|------------------|-----|------|-----|------|
| Rated voltage(V) | 120 | 1k   | 10k | 100k |
| 6.3 to 35        | 0.5 | 0.75 | 0.9 | 1.0  |

Part numbering system (example: 6.3V1500µF)

|             |   |                      |   |                          |                              |               |                   |   |               |
|-------------|---|----------------------|---|--------------------------|------------------------------|---------------|-------------------|---|---------------|
| RVZ         | — | 6                    | V | 152                      | M                            | HA5           | □                 | U | □             |
| Series code |   | Rated voltage symbol |   | Rated capacitance symbol | Capacitance tolerance symbol | Casing symbol | Additional symbol |   | Taping symbol |

- Land pattern size is described on page 10.
- The taping specifications are described on page 11.
- Soldering conditions are described on page 28.

• The standard ratings are described on the next page.

### Standard Ratings

| Rated voltage (V) | Item    | 6.3     |               |           |                      | 10      |               |           |                      | 16      |               |           |                      | 25      |               |           |                      | 35      |               |           |                      |     |      |     |
|-------------------|---------|---------|---------------|-----------|----------------------|---------|---------------|-----------|----------------------|---------|---------------|-----------|----------------------|---------|---------------|-----------|----------------------|---------|---------------|-----------|----------------------|-----|------|-----|
|                   |         | Case    | Casing symbol | Impedance | Rated ripple current | Case    | Casing symbol | Impedance | Rated ripple current | Case    | Casing symbol | Impedance | Rated ripple current | Case    | Casing symbol | Impedance | Rated ripple current | Case    | Casing symbol | Impedance | Rated ripple current |     |      |     |
|                   |         | ∅ D(mm) |               | Ω         | mArms                | ∅ D(mm) |               | Ω         | mArms                | ∅ D(mm) |               | Ω         | mArms                | ∅ D(mm) |               | Ω         | mArms                | ∅ D(mm) |               | Ω         | mArms                |     |      |     |
| 4.7               | —       | —       | —             | —         | —                    | —       | —             | —         | —                    | —       | —             | —         | 4x5.3                | D55     | 3.20          | 65        | 4x5.3                | D55     | 3.20          | 65        |                      |     |      |     |
| 10                | —       | —       | —             | —         | 4x5.3                | D55     | 3.20          | 65        | 4x5.3                | D55     | 3.20          | 65        | 4x5.8                | D61     | 1.80          | 80        | 5x5.3                | E55     | 1.50          | 110       | 5x5.8                | E61 | 0.76 | 150 |
| 15                | —       | —       | —             | —         | —                    | —       | —             | —         | 4x5.8                | D61     | 1.80          | 80        | 5x5.8                | E61     | 0.76          | 150       | 5x5.8                | E61     | 0.76          | 150       |                      |     |      |     |
| 22                | 4x5.3   | D55     | 3.20          | 65        | 4x5.8                | D61     | 1.80          | 80        | 5x5.3                | E55     | 1.50          | 110       | 5x5.8                | E61     | 0.76          | 150       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55 | 0.85 | 170 |
| 33                | 5x5.3   | E55     | 1.50          | 110       | 5x5.3                | E55     | 1.50          | 110       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55 | 0.85 | 170 |
| 47                | 5x5.3   | E55     | 1.50          | 110       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x5.8              | F61 | 0.44 | 230 |
| 68                | 6.3x5.8 | F61     | 0.44          | 230       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x7.7              | F80 | 0.34 | 280 |
| 100               | 6.3x5.3 | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.3              | F55     | 0.85          | 170       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x7.7              | F80     | 0.34          | 280       | 8x6.5                | G68 | 0.34 | 280 |
| 150               | 6.3x5.8 | F61     | 0.44          | 230       | 6.3x5.8              | F61     | 0.44          | 230       | 6.3x7.7              | F80     | 0.34          | 280       | 8x6.5                | G68     | 0.34          | 280       | 8x10                 | G10     | 0.20          | 450       | 8x10.5               | GA5 | 0.17 | 450 |
| 220               | 6.3x5.8 | F61     | 0.44          | 230       | 6.3x7.7              | F80     | 0.34          | 280       | 6.3x7.7              | F80     | 0.34          | 280       | 8x6.5                | G68     | 0.34          | 280       | 8x10                 | G10     | 0.20          | 450       | 8x10.5               | GA5 | 0.17 | 450 |
| 330               | 6.3x7.7 | F80     | 0.34          | 280       | 8x6.5                | G68     | 0.34          | 280       | 8x10                 | G10     | 0.20          | 450       | 8x10.5               | GA5     | 0.17          | 450       | 8x10.5               | GA5     | 0.17          | 450       | 10x10                | H10 | 0.10 | 670 |
| 470               | 8x10.5  | GA5     | 0.17          | 450       | 10x10                | H10     | 0.10          | 670       | 10x10.5              | HA5     | 0.09          | 670       | 10x10.5              | HA5     | 0.09          | 670       | 10x10.5              | HA5     | 0.09          | 670       | —                    | —   | —    | —   |
| 680               | 8x10.5  | GA5     | 0.17          | 450       | 10x10.5              | HA5     | 0.09          | 670       | 10x10.5              | HA5     | 0.09          | 670       | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —   | —    |     |
| 1000              | 8x10.5  | GA5     | 0.17          | 450       | 10x10.5              | HA5     | 0.09          | 670       | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —   |      |     |
| 1500              | 10x10.5 | HA5     | 0.09          | 670       | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —       | —             | —         | —                    | —   |      |     |

(Note) Rated ripple current : 105°C, 100kHz ; Impedance : 20°C, 100kHz