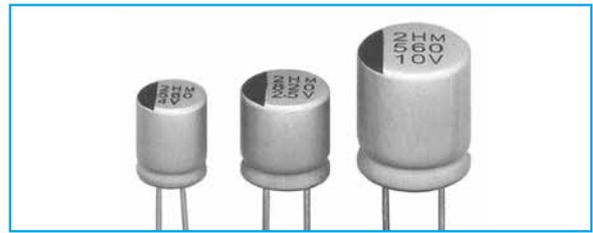


## Radial lead Type

GREEN CAP Low ESR 105°C 2000hours Anti-cleaning solvent

- Low ESR and high ripple current are realized.
- Guaranteed 105°C, 2000 hours.



Marking color : Red print

PRM

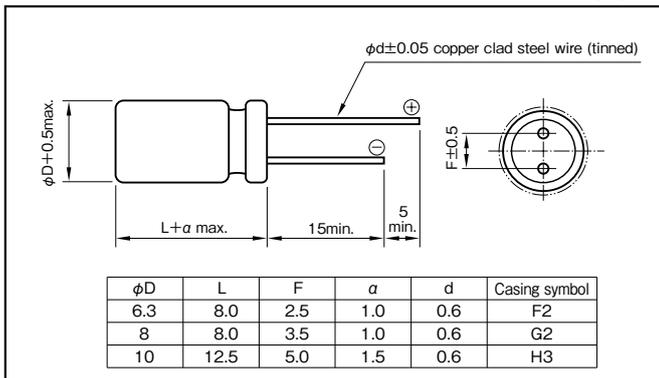
## Specifications

| Item   | Performance  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
|--|--|---|-----------|------------|-----------------|-------------------------------------|----------------------------------|------------------------------|---------------------------|---|------------|
| Category temperature range (°C)                            | -55 to +105  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Tolerance at rated capacitance (%)                         | ±20 (20°C, 120Hz)  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Leakage current (µA)<br>*Note                              | Less than 0.2CV or 500 whichever is larger (after 2 minutes)<br>C : Rated capacitance (µF) , V : Rated voltage (V) (20°C)  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Tangent of the loss angle (tanδ)                           | Less than values of standard ratings (20°C, 120Hz)   |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Characteristics at high and low temperature                | Impedance ratio (max.)   | Z-55°C/Z+20°C 1.25 (100kHz)   |           |            |                 |                                     |                                  |                              |                           |   |            |
|  | Endurance (105°C)<br>(Applied ripple current)  | <table border="1"> <tr><td>Test time</td><td>2000 hours</td></tr> <tr><td>Leakage current</td><td>The initial specified value or less</td></tr> <tr><td>Percentage of capacitance change</td><td>Within ±20% of initial value</td></tr> <tr><td>Tangent of the loss angle</td><td>150% or less of the initial specified value</td></tr> <tr><td>ESR change</td><td>200% or less of the initial specified value</td></tr> </table> | Test time | 2000 hours | Leakage current | The initial specified value or less | Percentage of capacitance change | Within ±20% of initial value | Tangent of the loss angle | 150% or less of the initial specified value | ESR change |
| Test time  | 2000 hours   |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Leakage current  | The initial specified value or less  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Percentage of capacitance change                           | Within ±20% of initial value   |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Tangent of the loss angle                                  | 150% or less of the initial specified value  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| ESR change   | 200% or less of the initial specified value  |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Damp heat, steady state<br>(humidity)<br>60°C, 90 to 95%RH | Test time  | 500 hours   |           |            |                 |                                     |                                  |                              |                           |   |            |
|  | Leakage current  | The initial specified value or less   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Characteristics of applied surge voltage                   | Percentage of capacitance change   | Within ±20% of initial value  |           |            |                 |                                     |                                  |                              |                           |   |            |
|  | Tangent of the loss angle  | 150% or less of the initial specified value   |           |            |                 |                                     |                                  |                              |                           |   |            |
|  | ESR change   | 200% or less of the initial specified value   |           |            |                 |                                     |                                  |                              |                           |   |            |
|  | The capacitors shall be subject to 1000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) in 6 minutes per cycle. Surge voltage : 1.15 times of rated voltage |   |           |            |                 |                                     |                                  |                              |                           |   |            |
| Failure rate   | 0.5% per 1000 hours maximum (Confidence level 60% at 105°C)  |   |           |            |                 |                                     |                                  |                              |                           |   |            |

\*Note : If any doubt arises, measure the leakage current after following voltage application treatment.  
Voltage application treatment : DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

## Outline Drawing

Unit : mm



- Soldering conditions are described on page 14.
- The taping specifications are described on page 18,19.

| Part numbering system (example : 4V561M F2 B) |                      |                          |                              |               |                 |               |
|---|----------------------|--------------------------|------------------------------|---------------|-----------------|---------------|
| PRM   | 4                    | V                        | 561                          | M             | F2              | B             |
| Series code                                   | Rated voltage symbol | Rated capacitance symbol | Capacitance tolerance symbol | Casing symbol | Optional symbol | Taping symbol |

**Standard Ratings**

| Rated voltage (V)<br>Item<br>Rated capacitance (µF) | 2.5      |       |                  |                                  | 4        |       |                  |                                  | 6.3      |       |                  |                                  | 10       |       |                  |                                  |
|---|----------|-------|------------------|----------------------------------|----------|-------|------------------|----------------------------------|----------|-------|------------------|----------------------------------|----------|-------|------------------|----------------------------------|
|   | Case     | tan δ | ESR<br>(mΩ max.) | Rated ripple current<br>(mA rms) | Case     | tan δ | ESR<br>(mΩ max.) | Rated ripple current<br>(mA rms) | Case     | tan δ | ESR<br>(mΩ max.) | Rated ripple current<br>(mA rms) | Case     | tan δ | ESR<br>(mΩ max.) | Rated ripple current<br>(mA rms) |
|   | φD×L(mm) |       |                  |                                  | φD×L(mm) |       |                  |                                  | φD×L(mm) |       |                  |                                  | φD×L(mm) |       |                  |                                  |
| 220   | —        | —     | —                | —                                | —        | —     | —                | —                                | —        | —     | —                | —                                | 6.3×8.0  | 0.10  | 10               | 4680                             |
| 270   | —        | —     | —                | —                                | —        | —     | —                | —                                | —        | —     | —                | —                                | 6.3×8.0  | 0.10  | 10               | 4680                             |
| 330   | 6.3×8.0  | 0.10  | 7                | 5600                             | —        | —     | —                | —                                | 6.3×8.0  | 0.10  | 10               | 4680                             | 8×8.0    | 0.08  | 10               | 5000                             |
| 390   | —        | —     | —                | —                                | —        | —     | —                | —                                | —        | —     | —                | —                                | 8×8.0    | 0.08  | 10               | 5000                             |
| 470   | 6.3×8.0  | 0.10  | 7                | 5600                             | —        | —     | —                | —                                | 6.3×8.0  | 0.10  | 7                | 5600                             | 8×8.0    | 0.08  | 8                | 5700                             |
| 560   | 6.3×8.0  | 0.10  | 7                | 5600                             | 6.3×8.0  | 0.10  | 7                | 5600                             | 8×8.0    | 0.08  | 7                | 6100                             | 10×12.5  | 0.12  | 12               | 5300                             |
| 680   | —        | —     | —                | —                                | 8×8.0    | 0.08  | 6                | 6100                             | 8×8.0    | 0.08  | 8                | 5700                             | —        | —     | —                | —                                |
| 820   | 8×8.0    | 0.08  | 6                | 6100                             | 8×8.0    | 0.08  | 6                | 6100                             | 10×12.5  | 0.12  | 10               | 5500                             | —        | —     | —                | —                                |
| 1000  | 8×8.0    | 0.08  | 6                | 6100                             | 10×12.5  | 0.12  | 8                | 5500                             | 10×12.5  | 0.12  | 10               | 5500                             | —        | —     | —                | —                                |
| 1200  | 10×12.5  | 0.12  | 8                | 5500                             | 10×12.5  | 0.12  | 8                | 5500                             | —        | —     | —                | —                                | —        | —     | —                | —                                |
| 1500  | 10×12.5  | 0.12  | 8                | 5500                             | —        | —     | —                | —                                | —        | —     | —                | —                                | —        | —     | —                | —                                |

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

ALUMINUM

POLYMER  
HYBRID

105°C