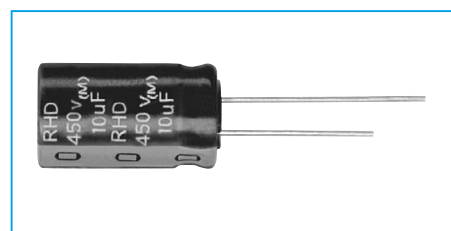
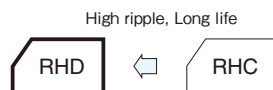


### 105°C Use, Miniature, High-Ripple, Long Life Capacitors

GREEN  
CAP

105°C  
12000hours

- Higher ripple current.
- Guarantees 10000 to 12000 hours at 105°C.
- Best-suited to electronic ballast.



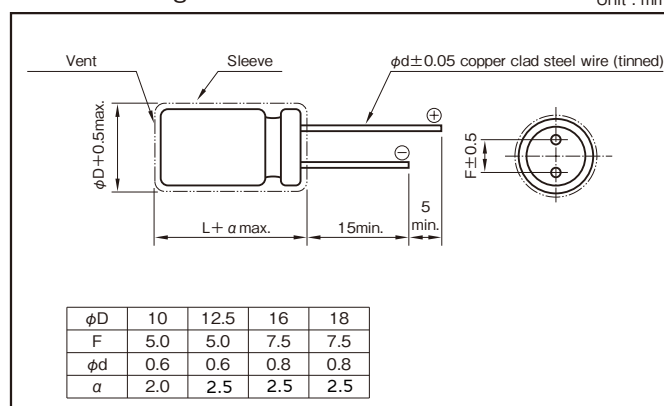
Marking color : White print on a black sleeve

### Specifications

| Item  | Performance   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
|---|---|--|------------|-------------------|--|------------|------------|-----------------------|-------------------------------------|------|------|--------------------|--------------------------------------|--|--|-----------------------|---|--|--|
| Category temperature range (°C)               | -25 to +105   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Rated Voltage (V)                             | 160 to 450  |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Tolerance at rated capacitance (%)            | ±20 (20°C,120Hz)  |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Leakage current(μA)                           | Less than 0.04CV + 100 (after 1 minutes) C:Rated capacitance (μF),V:Rated Voltage (V) (20°C)  |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Tangent of loss angle                         | <table><tr><td colspan="2">Rated voltage (V)</td><td>160 to 250</td><td>350 to 450</td></tr><tr><td colspan="2">Tangent of loss angle</td><td>0.15</td><td>0.20</td></tr></table> (20°C,120Hz)  |  |            | Rated voltage (V) |  | 160 to 250 | 350 to 450 | Tangent of loss angle |                                     | 0.15 | 0.20 |                    |                                      |  |  |                       |   |  |  |
|   | Rated voltage (V)   |  | 160 to 250 | 350 to 450        |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Tangent of loss angle                         |   | 0.15   | 0.20       |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Characteristics at high and low temperature   | <table><tr><td colspan="2">Rated voltage (V)</td><td>160 to 250</td><td>350 to 450</td></tr><tr><td>Impedance ratio</td><td>Z-25°C/Z+20°C</td><td>3</td><td>6</td></tr></table> (120Hz)   |  |            | Rated voltage (V) |  | 160 to 250 | 350 to 450 | Impedance ratio       | Z-25°C/Z+20°C                       | 3    | 6    |                    |                                      |  |  |                       |   |  |  |
|   | Rated voltage (V)   |  | 160 to 250 | 350 to 450        |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Impedance ratio                               | Z-25°C/Z+20°C   | 3  | 6          |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Endurance (105°C)<br>(Applied ripple current) | <table><tr><td>Test time</td><td colspan="3">φ10 : 10000hours<br/>φ12.5 to 18 : 12000hours</td></tr><tr><td>Leakage current</td><td colspan="3">The initial specified value or less</td></tr><tr><td>Capacitance change</td><td colspan="3">Within -30% to +30% of initial value</td></tr><tr><td>Tangent of loss angle</td><td colspan="3">300% or less of the initial specified value</td></tr></table> |  |            | Test time         | φ10 : 10000hours<br>φ12.5 to 18 : 12000hours |            |            | Leakage current       | The initial specified value or less |      |      | Capacitance change | Within -30% to +30% of initial value |  |  | Tangent of loss angle | 300% or less of the initial specified value |  |  |
|   | Test time   | φ10 : 10000hours<br>φ12.5 to 18 : 12000hours |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
|   | Leakage current   | The initial specified value or less          |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
|   | Capacitance change  | Within -30% to +30% of initial value         |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Tangent of loss angle                         | 300% or less of the initial specified value   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Shelf life (105°C)                            | <table><tr><td>Test time</td><td colspan="3">1000hours</td></tr><tr><td>Leakage current</td><td colspan="3">The initial specified value or less</td></tr><tr><td>Capacitance change</td><td colspan="3">Within -20% to +20% of initial value</td></tr><tr><td>Tangent of loss angle</td><td colspan="3">200% or less of the initial specified value</td></tr></table>                                     |  |            | Test time         | 1000hours                                    |            |            | Leakage current       | The initial specified value or less |      |      | Capacitance change | Within -20% to +20% of initial value |  |  | Tangent of loss angle | 200% or less of the initial specified value |  |  |
|   | Test time   | 1000hours                                    |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
|   | Leakage current   | The initial specified value or less          |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
|   | Capacitance change  | Within -20% to +20% of initial value         |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Tangent of loss angle                         | 200% or less of the initial specified value   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Voltage application treatment                 |   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |
| Applicable Standards                          | JIS C 5101-01, -04 1998 (IEC 60384-1 1992,60384-4 1985)   |  |            |                   |  |            |            |                       |                                     |      |      |                    |                                      |  |  |                       |   |  |  |

### Outline Drawing

Unit : mm



### Coefficient of Frequency for Rated Ripple Current

| Rated voltage (V) | Frequency (Hz) |      |      |      |      |
|-------------------|----------------|------|------|------|------|
|                   | 50             | 120  | 1k   | 10k  | 100k |
| 160 to 450        | 0.30           | 0.50 | 0.80 | 0.90 | 1.00 |

### Part numbering system (example : 400V47μF)

|             |   |                      |   |                          |                              |               |   |                   |
|-------------|---|----------------------|---|--------------------------|------------------------------|---------------|---|-------------------|
| RHD         | — | 400                  | V | 470                      | M                            | K6            | # | B                 |
| Series code |   | Rated voltage symbol |   | Rated capacitance symbol | Capacitance tolerance symbol | Casing symbol |   | Additional symbol |

# Standard Ratings

| Rated voltage(V)<br>Case<br>φD×L (mm) |  | Item<br>Casing<br>symbol | 160                        |          |  | 200                        |          |  | 250                        |          |  | 350                        |          |  |
|---------------------------------------|--|--------------------------|----------------------------|----------|--|----------------------------|----------|--|----------------------------|----------|--|----------------------------|----------|--|
|                                       |  |                          | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> |
| 10×16                                 |  | H4                       | 10                         | 20       | 250  | 10                         | 20       | 250  | —                          | —        | —  | 6.8                        | 39       | 220  |
| 10×20                                 |  | H5                       | 22                         | 9.0      | 500  | 22                         | 9.0      | 500  | 10                         | 20       | 280  | 10                         | 27       | 280  |
|                                       |  |                          | 33                         | 6.0      | 500  | —                          | —        | —  | —                          | —        | —  | —                          | —        | —  |
| 12.5×20                               |  | I5                       | 47                         | 4.2      | 660  | 33                         | 6.0      | 600  | 22                         | 9.0      | 600  | 22                         | 12       | 350  |
|                                       |  |                          | —                          | —        | —  | 47                         | 4.2      | 660  | 33                         | 6.0      | 600  | —                          | —        | —  |
| 12.5×25                               |  | I6                       | 68                         | 2.9      | 760  | 68                         | 2.9      | 760  | 47                         | 4.2      | 720  | —                          | —        | —  |
| 16×20                                 |  | J5                       | 68                         | 2.9      | 760  | 68                         | 2.9      | 760  | 47                         | 4.2      | 720  | 33                         | 8.0      | 500  |
| 16×25                                 |  | J6                       | 100                        | 2.0      | 1120   | 100                        | 2.0      | 1120   | 68                         | 2.9      | 920  | 47                         | 5.6      | 660  |
| 16×31.5                               |  | J7                       | 150                        | 1.3      | 1360   | 150                        | 1.3      | 1360   | 100                        | 2.0      | 1200   | 68                         | 3.9      | 850  |
|                                       |  |                          | 220                        | 0.9      | 1400   | —                          | —        | —  | —                          | —        | —  | —                          | —        | —  |
| 18×20                                 |  | K5                       | 100                        | 2.0      | 1120   | 100                        | 2.0      | 1120   | 68                         | 2.9      | 920  | 47                         | 5.6      | 660  |
| 18×25                                 |  | K6                       | 150                        | 1.3      | 1360   | 150                        | 1.3      | 1360   | 100                        | 2.0      | 1200   | 68                         | 3.9      | 850  |
|                                       |  |                          | 220                        | 0.9      | 1400   | —                          | —        | —  | —                          | —        | —  | —                          | —        | —  |
| 18×31.5                               |  | K7                       | —                          | —        | —  | 220                        | 0.9      | 1700   | 150                        | 1.3      | 1500   | —                          | —        | —  |

| Rated voltage(V)<br>Case<br>φD×L (mm) |  | Item<br>Casing<br>symbol | 400                        |          |  | 450                        |          |  |
|---------------------------------------|--|--------------------------|----------------------------|----------|--|----------------------------|----------|--|
|                                       |  |                          | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> | Rated<br>capacitance<br>μF | ESR<br>Ω | Rated ripple<br>current<br>mA <sub>rms</sub> |
| 10×16                                 |  | H4                       | 6.8                        | 39       | 220  | —                          | —        | —  |
| 10×20                                 |  | H5                       | 10                         | 27       | 280  | 6.8                        | 39       | 150  |
| 12.5×20                               |  | I5                       | —                          | —        | —  | 10                         | 27       | 320  |
| 12.5×25                               |  | I6                       | 22                         | 12       | 430  | —                          | —        | —  |
| 16×20                                 |  | J5                       | 22                         | 12       | 430  | —                          | —        | —  |
| 16×25                                 |  | J6                       | 33                         | 8.0      | 640  | 22                         | 12       | 560  |
| 16×31.5                               |  | J7                       | 47                         | 5.6      | 840  | 33                         | 8.0      | 700  |
| 18×20                                 |  | K5                       | 33                         | 8.0      | 640  | 22                         | 12       | 560  |
| 18×25                                 |  | K6                       | 47                         | 5.6      | 840  | 33                         | 8.0      | 700  |
| 18×31.5                               |  | K7                       | 68                         | 3.9      | 1000   | 47                         | 5.6      | 880  |
| 18×35.5                               |  | K8                       | —                          | —        | —  | 68                         | 3.9      | 1130   |

(Note) ESR : 20°C, 120Hz ; Rated ripple current : 105°C, 100kHz

## NOTE

Design, Specifications are subject to change without notice.  
Ask factory for technical specifications before purchase and/or use.