# RJB MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

ELNA®

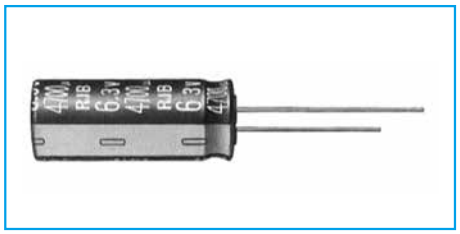
## 105°C Use, Miniature, High-Reliability, Low Impedance Capacitors

GREEN CAP | Low Impedance | 105°C 5000hours | Anti-cleaning solvent

- Smaller and higher ripple current than RJH Series.
- Guarantees 5000 hours at 105°C.
  (φ 5 to 6.3 : 2000 hours ; φ 8 to 10 : 3000 hours)

Miniaturized

RJB ⇦ RJH



Marking color : White print on a black sleeve

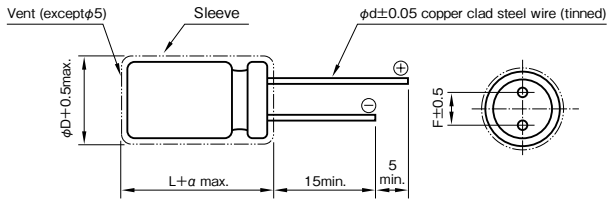
## Specifications

| Item | Performance |
|---|---|
| Category temperature range (℃) | −55 to +105 |
| Tolerance at rated capacitance (%) | ±20 (20℃,120Hz) |
| Leakage current (μA) | Less than 0.01CV + 1 (after 2 minutes) C : Rated capacitance (μF) ; V : Rated voltage (V) (20℃) |
| Tangent of loss angle (tanδ) | Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100<br>tanδ (max.): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 / 0.09 / 0.08<br>0.02 is added to every 1000μF increase over 1000μF. (20℃,120Hz) |
| Characteristics at high and low temperature | Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 100<br>Impedance ratio (max.) Z−55℃/Z+20℃: 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 (120Hz) |
| Endurance (105℃) (Applied ripple current) | Test time: 5000 hours (φ5 to 6.3 : 2000 hours) (φ8 to 10 : 3000 hours)<br>Leakage current: The initial specified value or less<br>Percentage of capacitance change: Within ±20% of initial value<br>Tangent of the loss angle: 200% or less of the initial specified value |
| Shelf life (105℃) | Test time: 1000 hours<br>Leakage current: The initial specified value or less<br>Percentage of capacitance change: Within ±15% of initial value<br>Tangent of the loss angle: 150% or less of the initial specified value<br>Voltage application treatment |
| Applicable standards | JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985) |



## Outline Drawing

Unit : mm




| φD | 5 | 6.3 | 8 | 10 | 12.5 | 16 |
|---|---|---|---|---|---|---|
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 |
| φd | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 |
| α | 1.0 | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 |

## Coefficient of Frequency for Rated Ripple Current

| Rated capacitance (μF) \ Frequency (Hz) | 120 | 1k | 10k | 100k |
|---|---|---|---|---|
| 3.3 to 180 | 0.40 | 0.75 | 0.90 | 1 |
| 220 to 390 | 0.50 | 0.85 | 0.95 | 1 |
| 470 to 1800 | 0.60 | 0.88 | 0.96 | 1 |
| 2200 to 3900 | 0.75 | 0.90 | 0.98 | 1 |
| 4700 to 10000 | 0.85 | 0.95 | 1.00 | 1 |

## Part numbering system (example : 10V1000μF)

| RJB | — | 10 | V | 102 | M | H4 | # | — | ⬚ |
|---|---|---|---|---|---|---|---|---|---|
| Series code | | Rated voltage symbol | | Rated capacitance symbol | Capacitance tolerance symbol | Casing symbol | | | Taping(Forming) symbol |

## Standard Ratings

| Rated voltage (V) / Item / Rated capacitance (μF) | 6.3 | | | | | 10 | | | | | 16 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current |
| | φD×L (mm) | | 20℃ | −10℃ | (mArms) | φD×L (mm) | | 20℃ | −10℃ | (mArms) | φD×L (mm) | | 20℃ | −10℃ | (mArms) |
| 100 | — | — | — | — | — | 5×11.5 | E3 | 0.65 | 1.3 | 181 | — | — | — | — | — |
| 220 | — | — | — | — | — | 6.3×11.5 | F3 | 0.32 | 0.64 | 290 | — | — | — | — | — |
| 330 | 6.3×11.5 | F3 | 0.32 | 0.64 | 290 | 8×12 | G3 | 0.17 | 0.34 | 555 | 8×12 | G3 | 0.17 | 0.34 | 555 |
| 470 | 8×12 | G3 | 0.17 | 0.34 | 555 | 8×12 | G3 | 0.17 | 0.34 | 555 | 10×12.5 | H3 | 0.12 | 0.24 | 760 |
| 680 | 8×12 | G3 | 0.17 | 0.34 | 555 | 10×12.5 | H3 | 0.12 | 0.24 | 760 | 10×16 | H4 | 0.080 | 0.16 | 1050 |
| 1000 | 10×12.5 | H3 | 0.12 | 0.24 | 760 | 10×16 | H4 | 0.080 | 0.16 | 1050 | 10×20 | H5 | 0.062 | 0.124 | 1220 |
| 2200 | 10×25 | H6 | 0.052 | 0.104 | 1440 | 12.5×20 | I5 | 0.042 | 0.084 | 1690 | 12.5×25 | I6 | 0.034 | 0.068 | 1950 |
| 3300 | 12.5×20 | I5 | 0.042 | 0.084 | 1690 | 12.5×25 | I6 | 0.034 | 0.068 | 1950 | 16×25 | J6 | 0.028 | 0.056 | 2560 |
| 4700 | 12.5×30 | I7 | 0.030 | 0.060 | 2310 | 16×25 | J6 | 0.028 | 0.056 | 2560 | 16×31.5 | J7 | 0.025 | 0.050 | 3010 |
| 6800 | 16×25 | J6 | 0.028 | 0.056 | 2560 | 16×31.5 | J7 | 0.025 | 0.050 | 3010 | — | — | — | — | — |
| 10000 | 16×31.5 | J7 | 0.025 | 0.050 | 3010 | — | — | — | — | — | — | — | — | — | — |

| Rated voltage (V) / Item / Rated capacitance (μF) | 25 | | | | | 35 | | | | | 50 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current |
| | φD×L (mm) | | 20℃ | −10℃ | (mArms) | φD×L (mm) | | 20℃ | −10℃ | (mArms) | φD×L (mm) | | 20℃ | −10℃ | (mArms) |
| 22 | — | — | — | — | — | — | — | — | — | — | 5×11.5 | E3 | 0.95 | 1.9 | 170 |
| 33 | — | — | — | — | — | 5×11.5 | E3 | 0.65 | 1.3 | 181 | 6.3×11.5 | F3 | 0.46 | 0.92 | 260 |
| 47 | 5×11.5 | E3 | 0.65 | 1.3 | 181 | 6.3×11.5 | F3 | 0.32 | 0.64 | 290 | 6.3×11.5 | F3 | 0.46 | 0.92 | 260 |
| 100 | 6.3×11.5 | F3 | 0.32 | 0.64 | 290 | 8×12 | G3 | 0.17 | 0.34 | 555 | 8×12 | G3 | 0.21 | 0.42 | 485 |
| 150 | — | — | — | — | — | — | — | — | — | — | 10×12.5 | H3 | 0.19 | 0.38 | 615 |
| 220 | 8×12 | G3 | 0.17 | 0.34 | 555 | 10×12.5 | H3 | 0.12 | 0.24 | 760 | 10×16 | H4 | 0.16 | 0.32 | 850 |
| 330 | 10×12.5 | H3 | 0.12 | 0.24 | 760 | 10×16 | H4 | 0.080 | 0.16 | 1050 | 10×20 | H5 | 0.085 | 0.17 | 1050 |
| 470 | 10×16 | H4 | 0.080 | 0.16 | 1050 | 10×20 | H5 | 0.062 | 0.124 | 1220 | 12.5×20 | I5 | 0.060 | 0.12 | 1500 |
| 680 | 10×20 | H5 | 0.062 | 0.124 | 1220 | 12.5×20 | I5 | 0.042 | 0.084 | 1690 | 12.5×25 | I6 | 0.045 | 0.090 | 1832 |
| 1000 | 12.5×20 | I5 | 0.042 | 0.084 | 1690 | 12.5×25 | I6 | 0.034 | 0.068 | 1950 | 16×25 | J6 | 0.038 | 0.076 | 2240 |
| 2200 | 16×25 | J6 | 0.028 | 0.056 | 2560 | 16×31.5 | J7 | 0.025 | 0.050 | 3010 | — | — | — | — | — |
| 3300 | 16×31.5 | J7 | 0.025 | 0.050 | 3010 | — | — | — | — | — | — | — | — | — | — |

| Rated voltage (V) / Item / Rated capacitance (μF) | 63 | | | | | 100 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current | Case | Casing symbol | Impedance (Ω max.) | | Rated ripple current |
| | φD×L (mm) | | 20℃ | −10℃ | (mArms) | φD×L (mm) | | 20℃ | −10℃ | (mArms) |
| 3.3 | — | — | — | — | — | 5×11.5 | E3 | 1.9 | 7.6 | 57 |
| 4.7 | 5×11.5 | E3 | 1.2 | 3.6 | 120 | 5×11.5 | E3 | 1.9 | 7.6 | 57 |
| 10 | 5×11.5 | E3 | 1.2 | 3.6 | 120 | 6.3×11.5 | F3 | 1.1 | 4.4 | 78 |
| 22 | 6.3×11.5 | F3 | 0.55 | 1.7 | 148 | 8×12 | G3 | 0.53 | 2.1 | 275 |
| 33 | 6.3×11.5 | F3 | 0.55 | 1.7 | 148 | 10×12.5 | H3 | 0.47 | 1.9 | 319 |
| 47 | 8×12 | G3 | 0.32 | 0.96 | 360 | 10×16 | H4 | 0.32 | 1.3 | 424 |
| 100 | 10×12.5 | H3 | 0.23 | 0.69 | 448 | 12.5×20 | I5 | 0.13 | 0.52 | 805 |
| 220 | 10×20 | H5 | 0.12 | 0.36 | 676 | 16×25 | J6 | 0.081 | 0.32 | 1290 |
| 330 | 12.5×20 | I5 | 0.075 | 0.23 | 979 | 16×25 | J6 | 0.081 | 0.32 | 1290 |
| 470 | 12.5×25 | I6 | 0.065 | 0.20 | 1180 | 16×31.5 | J7 | 0.059 | 0.23 | 1630 |
| 1000 | 16×31.5 | J7 | 0.042 | 0.13 | 1890 | — | — | — | — | — |

(Note) Rated ripple current : 105℃, 100kHz ; Impedance : 100kHz