

# RLB Series

- Endurance with ripple current : 5,000 hours at 85°C
- High ripple current capability in a commercial frequency range
- High ripple current for inverter control like air conditioner
- Rated voltage range : 180 to 250Vdc, Capacitance range : 600 to 2,200μF
- Non solvent resistant type
- RoHS2 Compliant

RLB

↑  
Longer life  
RLA

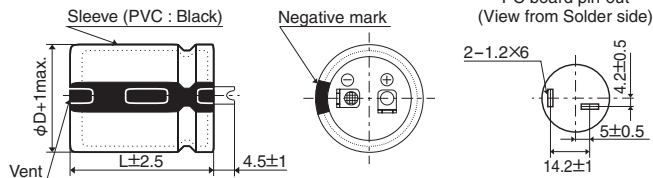


## SPECIFICATIONS

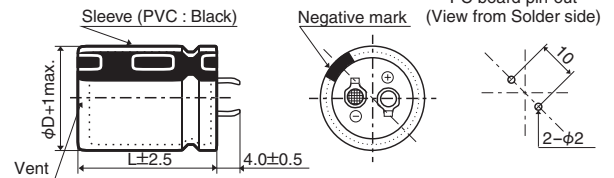
| Items  | Characteristics  |                                       |
|--|--|---------------------------------------|
| Category   | -25 to +85°C   |                                       |
| Temperature Range                                      |  |                                       |
| Rated Voltage Range                                    | 180 to 250V  |                                       |
| Capacitance Tolerance                                  | ± 10% (K) (at 20°C, 120Hz)   |                                       |
| Leakage Current  | $I \leq 3/CV$<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)   |                                       |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>ac</sub> )   | 180 to 250V                           |
|  | tan δ (Max.)   | 0.15 (at 20°C, 120Hz)                 |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>ac</sub> )   | 180 to 250V                           |
|  | Z(-25°C)/Z(+20°C)  | 4 (at 120Hz)                          |
| Endurance  | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 85°C.   |                                       |
|  | Capacitance change   | ≤ ±20% of the initial value           |
|  | D. F. (tan δ)  | ≤ 200% of the initial specified value |
|  | Leakage current  | ≤ The initial specified value         |
| Shelf Life   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |                                       |
|  | Capacitance change   | ≤ ± 15% of the initial value          |
|  | D. F. (tan δ)  | ≤ 150% of the initial specified value |
|  | Leakage current  | ≤ The initial specified value         |

## DIMENSIONS [mm]

### Terminal Code : LI (φ30, φ35) : Standard

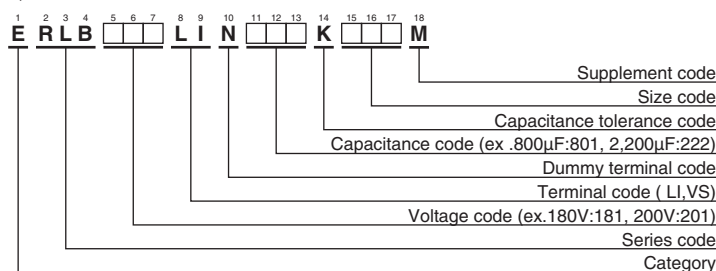


### Terminal Code : VS (φ30, φ35)



The standard design has no plastic disc.

## PART NUMBERING SYSTEM



Please refer to "Product code guide (snap-in type)"

◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/85°C, 120Hz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/85°C, 120Hz) | Part No.           |
|-----------------------|----------|--------------------|-------|---|--------------------|-----------------------|----------|--------------------|-------|---|--------------------|
| 180                   | 900      | 30 × 35            | 0.15  | 4.66                                    | ERLB181LIN901KR35M | 210                   | 1,400    | 30 × 55            | 0.15  | 6.31                                    | ERLB211LIN142KR55M |
|                       | 1,100    | 30 × 40            | 0.15  | 5.17                                    | ERLB181LIN112KR40M |                       | 1,500    | 35 × 45            | 0.15  | 6.21                                    | ERLB211LIN152KA45M |
|                       | 1,300    | 30 × 45            | 0.15  | 5.64                                    | ERLB181LIN132KR45M |                       | 1,700    | 35 × 50            | 0.15  | 6.82                                    | ERLB211LIN172KA50M |
|                       | 1,500    | 30 × 50            | 0.15  | 6.07                                    | ERLB181LIN152KR50M |                       | 2,000    | 35 × 55            | 0.15  | 7.62                                    | ERLB211LIN202KA55M |
|                       | 1,500    | 35 × 40            | 0.15  | 5.75                                    | ERLB181LIN152KA40M | 220                   | 700      | 30 × 35            | 0.15  | 4.27                                    | ERLB221LIN701KR35M |
|                       | 1,700    | 30 × 55            | 0.15  | 6.63                                    | ERLB181LIN172KR55M |                       | 900      | 30 × 40            | 0.15  | 4.85                                    | ERLB221LIN901KR40M |
|                       | 1,800    | 35 × 45            | 0.15  | 6.37                                    | ERLB181LIN182KA45M |                       | 1,000    | 30 × 45            | 0.15  | 5.19                                    | ERLB221LIN102KR45M |
|                       | 2,000    | 35 × 50            | 0.15  | 6.84                                    | ERLB181LIN202KA50M |                       | 1,000    | 35 × 35            | 0.15  | 4.87                                    | ERLB221LIN102KA35M |
| 200                   | 900      | 30 × 35            | 0.15  | 4.66                                    | ERLB201LIN901KR35M |                       | 1,200    | 30 × 50            | 0.15  | 5.68                                    | ERLB221LIN122KR50M |
|                       | 1,000    | 30 × 40            | 0.15  | 5.01                                    | ERLB201LIN102KR40M |                       | 1,200    | 35 × 40            | 0.15  | 5.44                                    | ERLB221LIN122KA40M |
|                       | 1,200    | 30 × 45            | 0.15  | 5.51                                    | ERLB201LIN122KR45M |                       | 1,300    | 30 × 55            | 0.15  | 6.09                                    | ERLB221LIN132KR55M |
|                       | 1,200    | 35 × 35            | 0.15  | 5.14                                    | ERLB201LIN122KA35M |                       | 1,400    | 35 × 45            | 0.15  | 5.96                                    | ERLB221LIN142KA45M |
|                       | 1,400    | 30 × 50            | 0.15  | 5.95                                    | ERLB201LIN142KR50M | 1,600                 | 35 × 50  | 0.15               | 6.51  | ERLB221LIN162KA50M                      |                    |
|                       | 1,400    | 35 × 40            | 0.15  | 5.66                                    | ERLB201LIN142KA40M | 1,800                 | 35 × 55  | 0.15               | 7.10  | ERLB221LIN182KA55M                      |                    |
|                       | 1,500    | 30 × 55            | 0.15  | 6.36                                    | ERLB201LIN152KR55M | 250                   | 600      | 30 × 35            | 0.15  | 4.03                                    | ERLB251LIN601KR35M |
|                       | 1,600    | 35 × 45            | 0.15  | 6.14                                    | ERLB201LIN162KA45M |                       | 800      | 30 × 40            | 0.15  | 4.66                                    | ERLB251LIN801KR40M |
| 1,900                 | 35 × 50  | 0.15               | 6.82  | ERLB201LIN192KA50M                      | 900                |                       | 30 × 45  | 0.15               | 5.01  | ERLB251LIN901KR45M                      |                    |
| 2,200                 | 35 × 55  | 0.15               | 7.60  | ERLB201LIN222KA55M                      | 900                |                       | 35 × 35  | 0.15               | 4.73  | ERLB251LIN901KA35M                      |                    |
| 210                   | 800      | 30 × 35            | 0.15  | 4.48                                    | ERLB211LIN801KR35M |                       | 1,000    | 30 × 50            | 0.15  | 5.32                                    | ERLB251LIN102KR50M |
|                       | 900      | 30 × 40            | 0.15  | 4.86                                    | ERLB211LIN901KR40M |                       | 1,100    | 35 × 40            | 0.15  | 5.33                                    | ERLB251LIN112KA40M |
|                       | 1,100    | 30 × 45            | 0.15  | 5.39                                    | ERLB211LIN112KR45M |                       | 1,200    | 30 × 55            | 0.15  | 5.96                                    | ERLB251LIN122KR55M |
|                       | 1,100    | 35 × 35            | 0.15  | 5.06                                    | ERLB211LIN112KA35M |                       | 1,200    | 35 × 45            | 0.15  | 5.68                                    | ERLB251LIN122KA45M |
|                       | 1,200    | 30 × 50            | 0.15  | 5.71                                    | ERLB211LIN122KR50M | 1,400                 | 35 × 50  | 0.15               | 6.25  | ERLB251LIN142KA50M                      |                    |
|                       | 1,300    | 35 × 40            | 0.15  | 5.65                                    | ERLB211LIN132KA40M | 1,600                 | 35 × 55  | 0.15               | 6.87  | ERLB251LIN162KA55M                      |                    |

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Frequency(Hz)             | 50   | 120  | 300  | 1k   | 10k  | 50k  |
|---------------------------|------|------|------|------|------|------|
| 180 to 250V <sub>dc</sub> | 0.70 | 1.00 | 1.17 | 1.32 | 1.45 | 1.50 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.