

# LZA Series

- Adoption of innovative electrolyte and new technologies
- Very low impedance at high frequency
- Endurance with ripple current: 4,000 to 7,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

LZA

↑ Lower Z  
Downsized  
LXZ

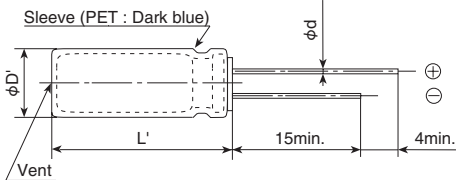


## ◆ SPECIFICATIONS

| Items   | Characteristics   |                                      |      |   |      |                                      |
|---|---|--------------------------------------|------|---|------|--------------------------------------|
| <b>Category</b>   | -55 to +105°C   |                                      |      |   |      |                                      |
| <b>Temperature Range</b>                                      | -55 to +105°C   |                                      |      |   |      |                                      |
| <b>Rated Voltage Range</b>                                    | 6.3 to 35V <sub>dc</sub>  |                                      |      |   |      |                                      |
| <b>Capacitance Tolerance</b>                                  | ±20% (M) (at 20°C, 120Hz)   |                                      |      |   |      |                                      |
| <b>Leakage Current</b>  | I=0.01CV or 3µA, whichever is greater.<br>Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 2 minutes)   |                                      |      |   |      |                                      |
| <b>Dissipation Factor (tan δ)</b>                             | Rated voltage (V <sub>dc</sub> )  | 6.3V                                 | 10V  | 16V                                       | 25V  | 35V                                  |
|   | tan δ (Max.)  | 0.22                                 | 0.19 | 0.16                                      | 0.14 | 0.12                                 |
|   | When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. (at 20°C, 120Hz)   |                                      |      |   |      |                                      |
| <b>Low Temperature Characteristics (Max. Impedance Ratio)</b> | Rated voltage (V <sub>dc</sub> )  | 6.3V                                 | 10V  | 16V                                       | 25V  | 35V                                  |
|   | Z(-55°C)/Z(+20°C)   | 4                                    | 3    | 3   | 3    | 3                                    |
| (at 120Hz)  |   |                                      |      |   |      |                                      |
| <b>Endurance</b>  | 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 the specified period of time at 105°C.                        |                                      |      |   |      |                                      |
|   | Time  | φ 10 : 4,000hours                    |      | φ 12.5 : 5,000hours                       |      | φ 16 to φ 18 : 7,000hours            |
|   | Rated voltage   | 6.3 to 10V <sub>dc</sub> (φ 10)      |      | 6.3 to 10V <sub>dc</sub> (φ 12.5 to φ 18) |      | 16 to 35V <sub>dc</sub>              |
|   | Capacitance change  | ≤ ±30% of the initial value          |      | ≤ ±20% of the initial value               |      | ≤ ±20% of the initial value          |
|   | D.F.(tan δ)   | ≤300% of the initial specified value |      | ≤200% of the initial specified value      |      | ≤200% of the initial specified value |
|   | Leakage current   | ≤The initial specified value         |      | ≤The initial specified value              |      | ≤The initial specified value         |
|   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°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. |                                      |      |   |      |                                      |
| <b>Shelf Life</b>   | Rated voltage   | 6.3 to 10V <sub>dc</sub> (φ 10)      |      | 6.3 to 10V <sub>dc</sub> (φ 12.5 to φ 18) |      | 16 to 35V <sub>dc</sub>              |
|   | Capacitance change  | ≤ ±30% of the initial value          |      | ≤ ±20% of the initial value               |      | ≤ ±20% of the initial value          |
|   | D.F.(tan δ)   | ≤300% of the initial specified value |      | ≤200% of the initial specified value      |      | ≤200% of the initial specified value |
|   | Leakage current   | ≤The initial specified value         |      | ≤The initial specified value              |      | ≤The initial specified value         |
|   |   |                                      |      |   |      |                                      |

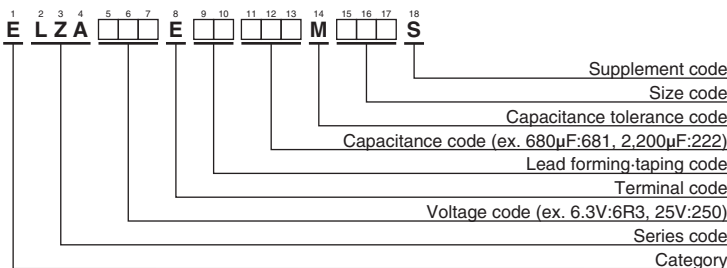
## ◆ DIMENSIONS [mm]

### ● Terminal Code : E



| φD  | 10         | 12.5 | 16  | 18  |
|-----|------------|------|-----|-----|
| φd  | 0.6        | 0.6  | 0.8 | 0.8 |
| F   | 5.0        | 5.0  | 7.5 | 7.5 |
| φD' | φD+0.5max. |      |     |     |
| L'  | L+1.5max.  |      |     |     |

## ◆ PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./20°C, 100kHz) | Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./20°C, 100kHz) | Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz) | Part No.           |                    |
|-----------------------|----------|--------------------|---------------------------------|---|--------------------|-----------------------|----------|--------------------|---------------------------------|---|--------------------|--------------------|
| 6.3                   | 1,500    | 10 × 12.5          | 0.063                           | 960   | ELZA6R3E□□152MJC5S | 16                    | 3,300    | 12.5 × 25          | 0.022                           | 2,350   | ELZA160E□□332MK25S |                    |
|                       | 1,800    | 10 × 16            | 0.049                           | 1,240   | ELZA6R3E□□182MJ16S |                       | 3,900    | 16 × 20            | 0.026                           | 2,330   | ELZA160E□□392ML20S |                    |
|                       | 2,700    | 10 × 20            | 0.035                           | 1,550   | ELZA6R3E□□272MJ20S |                       | 5,600    | 16 × 25            | 0.019                           | 2,760   | ELZA160E□□562ML25S |                    |
|                       | 3,300    | 10 × 25            | 0.033                           | 1,740   | ELZA6R3E□□332MJ25S |                       | 5,600    | 18 × 20            | 0.025                           | 2,640   | ELZA160E□□562MM20S |                    |
|                       | 4,700    | 12.5 × 20          | 0.029                           | 1,890   | ELZA6R3E□□472MK20S |                       | 8,200    | 18 × 25            | 0.018                           | 2,850   | ELZA160E□□822MM25S |                    |
|                       | 6,800    | 12.5 × 25          | 0.022                           | 2,350   | ELZA6R3E□□682MK25S |                       | 25       | 470                | 10 × 12.5                       | 0.063   | 960                | ELZA250E□□471MJC5S |
|                       | 6,800    | 16 × 20            | 0.026                           | 2,330   | ELZA6R3E□□682ML20S |                       |          | 680                | 10 × 16                         | 0.049   | 1,240              | ELZA250E□□681MJ16S |
|                       | 8,200    | 18 × 20            | 0.025                           | 2,640   | ELZA6R3E□□822MM20S |                       |          | 1,000              | 10 × 20                         | 0.035   | 1,550              | ELZA250E□□102MJ20S |
|                       | 10,000   | 16 × 25            | 0.019                           | 2,760   | ELZA6R3E□□103ML25S |                       |          | 1,200              | 10 × 25                         | 0.033   | 1,740              | ELZA250E□□122MJ25S |
|                       | 12,000   | 18 × 25            | 0.018                           | 2,850   | ELZA6R3E□□123MM25S |                       |          | 1,500              | 12.5 × 20                       | 0.029   | 1,890              | ELZA250E□□152MK20S |
| 10                    | 1,000    | 10 × 12.5          | 0.063                           | 960   | ELZA100E□□102MJC5S | 2,200                 |          | 12.5 × 25          | 0.022                           | 2,350   | ELZA250E□□222MK25S |                    |
|                       | 1,500    | 10 × 16            | 0.049                           | 1,240   | ELZA100E□□152MJ16S | 2,700                 |          | 16 × 20            | 0.026                           | 2,330   | ELZA250E□□272ML20S |                    |
|                       | 2,200    | 10 × 20            | 0.035                           | 1,550   | ELZA100E□□222MJ20S | 3,300                 |          | 18 × 20            | 0.025                           | 2,640   | ELZA250E□□332MM20S |                    |
|                       | 2,700    | 10 × 25            | 0.033                           | 1,740   | ELZA100E□□272MJ25S | 3,900                 |          | 16 × 25            | 0.019                           | 2,760   | ELZA250E□□392ML25S |                    |
|                       | 3,300    | 12.5 × 20          | 0.029                           | 1,890   | ELZA100E□□332MK20S | 4,700                 |          | 18 × 25            | 0.018                           | 2,850   | ELZA250E□□472MM25S |                    |
|                       | 4,700    | 12.5 × 25          | 0.022                           | 2,350   | ELZA100E□□472MK25S | 35                    | 330      | 10 × 12.5          | 0.063                           | 960   | ELZA350E□□331MJC5S |                    |
|                       | 4,700    | 16 × 20            | 0.026                           | 2,330   | ELZA100E□□472ML20S |                       | 470      | 10 × 16            | 0.049                           | 1,240   | ELZA350E□□471MJ16S |                    |
|                       | 6,800    | 16 × 25            | 0.019                           | 2,760   | ELZA100E□□682ML25S |                       | 680      | 10 × 20            | 0.035                           | 1,550   | ELZA350E□□681MJ20S |                    |
|                       | 6,800    | 18 × 20            | 0.025                           | 2,640   | ELZA100E□□682MM20S |                       | 820      | 10 × 25            | 0.033                           | 1,740   | ELZA350E□□821MJ25S |                    |
|                       | 8,200    | 18 × 25            | 0.018                           | 2,850   | ELZA100E□□822MM25S |                       | 1,000    | 12.5 × 20          | 0.029                           | 1,890   | ELZA350E□□102MK20S |                    |
| 16                    | 820      | 10 × 12.5          | 0.063                           | 960   | ELZA160E□□821MJC5S |                       | 1,500    | 12.5 × 25          | 0.022                           | 2,350   | ELZA350E□□152MK25S |                    |
|                       | 1,000    | 10 × 16            | 0.049                           | 1,240   | ELZA160E□□102MJ16S |                       | 1,800    | 16 × 20            | 0.026                           | 2,330   | ELZA350E□□182ML20S |                    |
|                       | 1,500    | 10 × 20            | 0.035                           | 1,550   | ELZA160E□□152MJ20S |                       | 2,200    | 18 × 20            | 0.025                           | 2,640   | ELZA350E□□222MM20S |                    |
|                       | 1,800    | 10 × 25            | 0.033                           | 1,740   | ELZA160E□□182MJ25S |                       | 2,700    | 16 × 25            | 0.019                           | 2,760   | ELZA350E□□272ML25S |                    |
|                       | 2,200    | 12.5 × 20          | 0.029                           | 1,890   | ELZA160E□□222MK20S |                       | 3,300    | 18 × 25            | 0.018                           | 2,850   | ELZA350E□□332MM25S |                    |

□ □ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) |      |      |      |
|-----------------|---------------|------|------|------|
|                 | 120           | 1k   | 10k  | 100k |
| 330 to 470      | 0.50          | 0.85 | 0.94 | 1.00 |
| 680 to 1,800    | 0.60          | 0.87 | 0.95 | 1.00 |
| 2,200 to 3,900  | 0.75          | 0.90 | 0.95 | 1.00 |
| 4,700 to 12,000 | 0.85          | 0.95 | 0.98 | 1.00 |

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.