

## LZ Series Ultra Low Impedance

### Features

- ◆ Ultra low impedance in 100KHz.
- ◆ Allow higher ripple current applied due to ultra low impedance.
- ◆ Load life 2000hrs at 105°C
- ◆ Suitable for application of mother board, computer peripheral etc.
- ◆ For more details, please refer to CapXon Engineering Bulletin No. 133
- ◆ RoHS Compliant



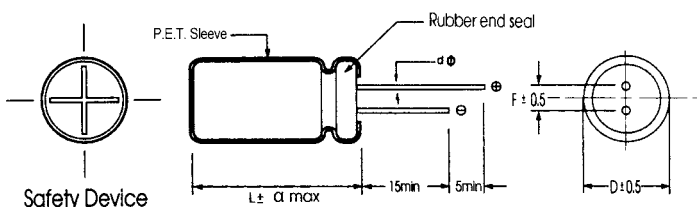
### Specifications

| Item   | Performance Characteristics  |     |    |    |    |
|--|--|-----|----|----|----|
| Operating Temperature Range  | -40 ~ +105°C   |     |    |    |    |
| Rated Voltage Range  | 6.3 ~ 25V with rate working voltage applied  |     |    |    |    |
| Capacitance Range  | 220 to 3300 μ F  |     |    |    |    |
| Capacitance Tolerance  | ±20% (20°C, 120Hz)   |     |    |    |    |
| Leakage Current (+20°C,max.)   | I ≤ 0.01CV or 3 μ A<br>After 2 minutes whichever is greater measured   |     |    |    |    |
| Dissipation Factor<br>(tan δ , at 20°C , 120Hz)  | Rated Voltage(V)   | 6.3 | 10 | 16 | 25 |
|  | D.F. (%) max   | 14  | 12 | 10 | 9  |
| For capacitance > 1000 μ F, add 2% per another 1000 μ F  |  |     |    |    |    |
| Low Temperature Characteristics<br>(at 120Hz)  | Impedance ratio max  |     |    |    |    |
|  | Rated Voltage(V)   | 6.3 | 10 | 16 | 25 |
|  | Z-25°C / Z+20°C  | 4   | 3  | 2  | 2  |
| For Capacitance Value > 1000 μ F, add 0.5 per another 1000 μ F for -25°C / +20°C<br>add 1 per another 1000 μ F for -40°C / +20°C |  |     |    |    |    |
| Load Life  | Test Conditions<br>Duration : 2000 hrs<br>Ambient temperature : +105°C<br>Applied voltage : Rated DC working voltage<br>After test requirement at +20°C<br>Capacitance change : Within ±25% of the initial measured value<br>Dissipation factor : Not exceed 200% of the initial specified value<br>Leakage current : Not exceed the specified value |     |    |    |    |
| Shelf Life   | Test Conditions<br>Duration : 1000 hrs<br>Ambient temperature : +105°C<br>After test requirement at +20°C<br>Capacitance change : Within ±25% of the initial measured value<br>Dissipation factor : Not exceed 200% of the initial specified value<br>Leakage current : Not exceed the specified value   |     |    |    |    |

### Multiplier for Ripple Current vs. Frequency

| CAP( μ F) \ Frequency(Hz) | 120Hz | 1KHz | 10KHz | 100KHz |
|---------------------------|-------|------|-------|--------|
| 100 ~ 330 μ F             | 0.40  | 0.75 | 0.93  | 1.00   |
| 390 ~ 1000 μ F            | 0.50  | 0.85 | 0.95  | 1.00   |
| 1200 ~ 3300 μ F           | 0.55  | 0.90 | 0.98  | 1.00   |

### Diagram of Dimensions:(unit:mm)



|     |               |               |
|-----|---------------|---------------|
| D φ | 8             | 10            |
| F   | 3.5           | 5.0           |
| d φ | L < 20<br>0.5 | L ≥ 20<br>0.6 |
|     | 0.6           |               |

|   |        |          |          |        |
|---|--------|----------|----------|--------|
| α | D < 18 | D = 18   |          | D > 18 |
|   |        | L < 35.5 | L ≥ 35.5 |        |
|   | 1.5    | 1.5      | 2.0      | 2.0    |

## Case Size

| WV      |         | 6.3  |        |           | 10   |        |           | 16   |        |           |
|---------|---------|------|--------|-----------|------|--------|-----------|------|--------|-----------|
|         |         | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| Cap(μF) |         |      |        |           |      |        |           |      |        |           |
| 330     |         |      |        |           |      |        | 8X11.5    | 1080 | 0.038  |           |
| 470     |         |      |        | 8X11.5    | 1080 | 0.038  | 8X11.5    | 1080 | 0.038  |           |
| 560     | 8x11.5  | 1080 | 0.038  | 8X11.5    | 1080 | 0.038  | 10X12.5   | 1500 | 0.027  |           |
| 680     | 8x11.5  | 1080 | 0.038  | 8X11.5    | 1080 | 0.038  | 8X16      | 1450 | 0.029  |           |
| 820     | 8x11.5  | 1080 | 0.038  | 10X12.5   | 1500 | 0.027  | 10X12.5   | 1500 | 0.027  |           |
| 1000    | 8x11.5  | 1080 | 0.038  | 10X12.5   | 1450 | 0.029  | 8X20      | 1850 | 0.020  |           |
| 1200    | 8x16    | 1100 | 0.036  | 8X16      | 1450 | 0.029  | 8X20      | 1850 | 0.020  |           |
| 1500    | 10x12.5 | 1500 | 0.027  | 10X12.5   | 1500 | 0.027  | 10X16     | 1910 | 0.018  |           |
| 1800    | 8x16    | 1450 | 0.029  | 8X20      | 1850 | 0.020  | 10X20     | 2540 | 0.017  |           |
| 2200    | 8x20    | 1850 | 0.020  | 8X20      | 1850 | 0.020  | 10X20     | 2540 | 0.015  |           |
| 2700    | 10x12.5 | 1500 | 0.027  | 10X16     | 1910 | 0.018  |           |      |        |           |
| 3300    | 10x16   | 1910 | 0.018  | 10X20     | 2540 | 0.016  | 10X25     | 2800 | 0.013  |           |
|         | 8x20    | 1850 | 0.020  | 10X20     | 2540 | 0.015  |           |      |        |           |
|         | 10x16   | 1910 | 0.018  | 10X25     | 2800 | 0.014  |           |      |        |           |
|         | 10x20   | 2540 | 0.013  |           |      |        |           |      |        |           |
|         | 10x30   | 2800 | 0.012  |           |      |        |           |      |        |           |

| WV      |         | 25     |           |  |
|---------|---------|--------|-----------|--|
| Cap(μF) | Size    | Ripple | Impedance |  |
| 220     | 8X11.5  | 1080   | 0.032     |  |
| 270     | 8X11.5  | 1150   | 0.031     |  |
| 330     | 8X11.5  | 1450   | 0.029     |  |
|         | 10X12.5 | 1850   | 0.027     |  |
|         | 8X20    | 1720   | 0.020     |  |
| 470     | 10X12.5 | 1440   | 0.025     |  |
|         | 10X16   | 1830   | 0.022     |  |
| 560     | 10X16   | 1850   | 0.021     |  |
|         | 8X20    | 1820   | 0.018     |  |
| 680     | 10X16   | 1920   | 0.020     |  |
|         | 10X20   | 2060   | 0.018     |  |
| 1000    | 10X20   | 2180   | 0.016     |  |

Ripple Current ( mA, rms ) at 105°C 100KHz  
 Max ESR (Ω) at 20°C 100KHz