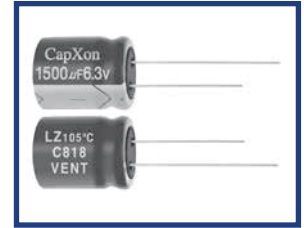


## LZ Series Ultra Low Impedance

### Features

- ◆ Ultra low impedance in 100KHz.
- ◆ Allow higher ripple current applied due to ultra low impedance.
- ◆ Endurance 2000hrs at 105°C
- ◆ Suitable for application of mother board, computer peripheral etc.
- ◆ RoHS Compliant



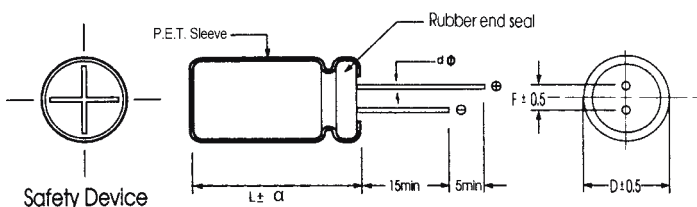
### Specifications

| 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 |  |     |    |    |    |
| Endurance  | 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

|    |               | $\phi$ DxL(mm) |        |           |         |        |           |         |        |           |
|----|---------------|----------------|--------|-----------|---------|--------|-----------|---------|--------|-----------|
| WV | Cap( $\mu$ F) | 6.3            |        |           | 10      |        |           | 16      |        |           |
|    |               | Size           | Ripple | Impedance | Size    | Ripple | Impedance | Size    | Ripple | Impedance |
|    | 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     | 8X16    | 1450   | 0.029     |
|    | 1000          | 8x11.5         | 1080   | 0.038     | 10X12.5 | 1450   | 0.029     | 10X12.5 | 1500   | 0.027     |
|    | 1200          | 8x16           | 1100   | 0.036     | 8X16    | 1450   | 0.029     | 10X16   | 1910   | 0.018     |
|    | 1500          | 10x12.5        | 1500   | 0.027     | 10X12.5 | 1500   | 0.027     | 10X20   | 2540   | 0.017     |
|    | 1800          | 8x16           | 1450   | 0.029     | 8X20    | 1850   | 0.020     | 10X20   | 2540   | 0.015     |
|    | 2200          | 8x20           | 1850   | 0.020     | 8X20    | 1850   | 0.020     |         |        |           |
|    | 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 | Cap( $\mu$ F) | 25      |        |           |
|----|---------------|---------|--------|-----------|
|    |               | 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     |
|    | 470           | 8X20    | 1720   | 0.020     |
|    |               | 10X12.5 | 1440   | 0.025     |
|    |               | 10X16   | 1830   | 0.022     |
|    | 560           | 10X16   | 1850   | 0.021     |
|    | 680           | 8X20    | 1820   | 0.018     |
|    |               | 10X16   | 1920   | 0.020     |
|    |               | 10X20   | 2060   | 0.018     |
|    | 1000          | 10X20   | 2180   | 0.016     |

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