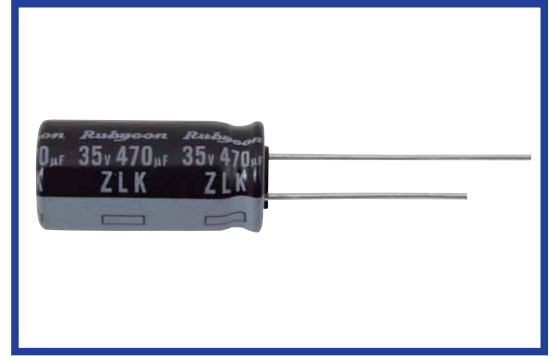


# ZLK SERIES

105°C Ultra High Ripple, Low Impedance.

## ◆FEATURES

- Load Life: 105°C 4000~5000hours.
- RoHS compliance.

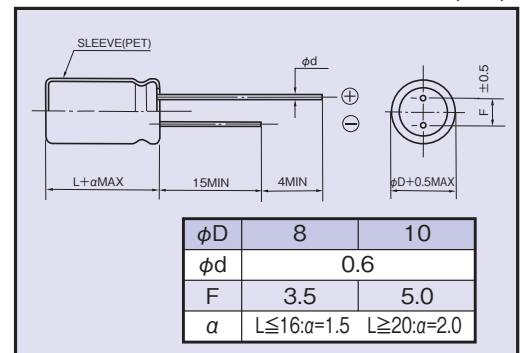


## ◆SPECIFICATIONS

| Items                                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                 |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|------|--|--------------------|-----------------------------------|-----------|-----------------|--------------------|--------------------------------------------|-----------------------|------|-----------------|------------------------------------|-----------------------|------|---|---|---|
| Category Temperature Range                        | -40~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                 |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Rated Voltage Range                               | 10~35V.DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                 |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Capacitance Tolerance                             | ±20% (20℃, 120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                 |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Leakage Current(MAX)                              | I=0.01 CV (After 2 minutes)<br>I=(μA)                      C=(μF)                      V=(V)<br>Leakage Current                      Rated Capacitance                      Rated Voltage                                                                                                                                                                                                                                                                                                                                                  |                       |                 |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| (tanδ)<br>Dissipation Factor(MAX)                 | <table><tr><td>Rated Voltage</td><td>10</td><td>16</td><td>25</td><td>35</td></tr><tr><td>tanδ</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td></tr></table> (20℃, 120Hz)                                                                                                                                                                                                                                                                                                                                                          |                       |                 |      |  | Rated Voltage      | 10                                | 16        | 25              | 35                 | tanδ                                       | 0.19                  | 0.16 | 0.14            | 0.12                               |                       |      |   |   |   |
| Rated Voltage                                     | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 16                    | 25              | 35   |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| tanδ                                              | 0.19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.16                  | 0.14            | 0.12 |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Endurance                                         | After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirement. <table><tr><td>Capacitance Change</td><td>Within ±25% of the initial value.</td><td>Case Size</td><td>(hrs) Life Time</td></tr><tr><td>Dissipation Factor</td><td>Not more than 200% of the specified value.</td><td>8×16, 8×20<br/>10×12.5</td><td>4000</td></tr><tr><td>Leakage Current</td><td>Not more than the specified value.</td><td>10×16, 10×20<br/>10×25</td><td>5000</td></tr></table> |                       |                 |      |  | Capacitance Change | Within ±25% of the initial value. | Case Size | (hrs) Life Time | Dissipation Factor | Not more than 200% of the specified value. | 8×16, 8×20<br>10×12.5 | 4000 | Leakage Current | Not more than the specified value. | 10×16, 10×20<br>10×25 | 5000 |   |   |   |
| Capacitance Change                                | Within ±25% of the initial value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Case Size             | (hrs) Life Time |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Dissipation Factor                                | Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8×16, 8×20<br>10×12.5 | 4000            |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Leakage Current                                   | Not more than the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10×16, 10×20<br>10×25 | 5000            |      |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Low Temperature Stability<br>Impedance Ratio(MAX) | <table><tr><td>Rated Voltage</td><td>10</td><td>16</td><td>25</td><td>35</td></tr><tr><td>Z(-25℃) / Z(20℃)</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-40℃) / Z(20℃)</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table> (120Hz)                                                                                                                                                                                                                                                                                     |                       |                 |      |  | Rated Voltage      | 10                                | 16        | 25              | 35                 | Z(-25℃) / Z(20℃)                           | 2                     | 2    | 2               | 2                                  | Z(-40℃) / Z(20℃)      | 3    | 3 | 3 | 3 |
| Rated Voltage                                     | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 16                    | 25              | 35   |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Z(-25℃) / Z(20℃)                                  | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2                     | 2               | 2    |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |
| Z(-40℃) / Z(20℃)                                  | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                     | 3               | 3    |  |                    |                                   |           |                 |                    |                                            |                       |      |                 |                                    |                       |      |   |   |   |

## ◆DIMENSIONS

(mm)



## ◆MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

| (Hz) Frequency | 120  | 1k   | 10k  | 100k≤ |
|----------------|------|------|------|-------|
| Coefficient    | 0.30 | 0.70 | 0.90 | 1.00  |

## ◆STANDARD SIZE

Size φDXL(mm)

Ripple current(mA r.m.s./105°C,100kHz),Impedance(Ω Max/100kHz)

| WV (V.DC) | Cap (μF) | Size (φDxL) | Ripple | Impedance |       |
|-----------|----------|-------------|--------|-----------|-------|
|           |          |             |        | 20°C      | -10°C |
| 10 (1A)   | 680      | 8×16        | 2050   | 0.059     | 0.18  |
|           | 680      | 10×12.5     | 2190   | 0.053     | 0.16  |
|           | 1000     | 8×20        | 2380   | 0.041     | 0.13  |
|           | 1000     | 10×16       | 2550   | 0.038     | 0.12  |
|           | 1500     | 10×20       | 2880   | 0.028     | 0.084 |
|           | 1800     | 10×25       | 3160   | 0.024     | 0.072 |
| 16 (1C)   | 470      | 8×16        | 2050   | 0.059     | 0.18  |
|           | 560      | 10×12.5     | 2190   | 0.053     | 0.16  |
|           | 680      | 8×20        | 2380   | 0.041     | 0.13  |
|           | 820      | 10×16       | 2550   | 0.038     | 0.12  |
|           | 1200     | 10×20       | 2880   | 0.028     | 0.084 |
|           | 1500     | 10×25       | 3160   | 0.024     | 0.072 |
| 25 (1E)   | 330      | 8×16        | 2050   | 0.059     | 0.18  |
|           | 390      | 10×12.5     | 2190   | 0.053     | 0.16  |
|           | 470      | 8×20        | 2380   | 0.041     | 0.13  |
|           | 560      | 10×16       | 2550   | 0.038     | 0.12  |
|           | 820      | 10×20       | 2880   | 0.028     | 0.084 |
|           | 1000     | 10×25       | 3160   | 0.024     | 0.072 |
| 35 (1V)   | 220      | 8×16        | 2050   | 0.059     | 0.18  |
|           | 220      | 10×12.5     | 2190   | 0.053     | 0.16  |
|           | 270      | 8×20        | 2380   | 0.041     | 0.13  |
|           | 330      | 10×16       | 2550   | 0.038     | 0.12  |
|           | 470      | 10×20       | 2880   | 0.028     | 0.084 |
|           | 560      | 10×25       | 3160   | 0.024     | 0.072 |

## ◆OPTION

|            | Code  |
|------------|-------|
| PET Sleeve | Blank |

## ◆PART NUMBER

|               |        |                   |                       |        |              |           |
|---------------|--------|-------------------|-----------------------|--------|--------------|-----------|
| □□□           | ZLK    | □□□               | M                     | □□□    | □□□          | DXL       |
| Rated Voltage | Series | Rated Capacitance | Capacitance Tolerance | Option | Lead Forming | Case Size |