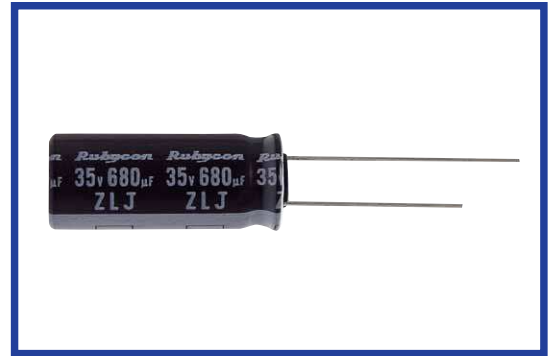


ZLJ SERIES

105°C Miniaturized, Long Life, Low impedance, High ripple.

◆FEATURES

- Load Life : 105°C 6000~10000 hours.
- RoHS compliance.



◆SPECIFICATIONS

| Items | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|--|-----------|-----------------|------|------|--------------------|--|---------------|---------|---------------|------------------|-----------------|------------------------------------|--------|------|------|------|------|------|---------|------|------------------|------|---|---|-----------|------|------|------|---|---|-------------------|------|-------|------|--|--|---------|-------|--|--|
| Category Temperature Range | -40~+105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3~100V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current(MAX) | I=0.01CV or 3µA whichever is greater. (After 2 minutes) I=(µA) Leakage Current C=(µF) Rated Capacitance V=(V) Rated Voltage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (tanδ) Dissipation Factor(MAX) | <table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> <td></td> </tr> </table> <p>When rated capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p> | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (20°C, 120Hz) | tanδ | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tanδ | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <p>After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.(6.3V,10V:±30%)</td> <td>Case Size</td> <td colspan="3">(hrs) Life Time</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> <td>φD≤6.3</td> <td>6.3V.DC</td> <td>10~50V.DC</td> <td>63~100V.DC</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> <td>8×11.5</td> <td>6000</td> <td>7000</td> <td>6000</td> </tr> <tr> <td></td> <td></td> <td>10×12.5</td> <td>8000</td> <td>9000</td> <td>8000</td> </tr> <tr> <td></td> <td></td> <td>8×16,8×20</td> <td>9000</td> <td>9000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>10×16,10×20,10×25</td> <td>9000</td> <td>10000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>φD≥12.5</td> <td colspan="3">10000</td> </tr> </table> | Capacitance Change | Within ±25% of the initial value.(6.3V,10V:±30%) | Case Size | (hrs) Life Time | | | Dissipation Factor | Not more than 200% of the specified value. | φD≤6.3 | 6.3V.DC | 10~50V.DC | 63~100V.DC | Leakage Current | Not more than the specified value. | 8×11.5 | 6000 | 7000 | 6000 | | | 10×12.5 | 8000 | 9000 | 8000 | | | 8×16,8×20 | 9000 | 9000 | 9000 | | | 10×16,10×20,10×25 | 9000 | 10000 | 9000 | | | φD≥12.5 | 10000 | | |
| Capacitance Change | Within ±25% of the initial value.(6.3V,10V:±30%) | Case Size | (hrs) Life Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Not more than 200% of the specified value. | φD≤6.3 | 6.3V.DC | 10~50V.DC | 63~100V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Not more than the specified value. | 8×11.5 | 6000 | 7000 | 6000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10×12.5 | 8000 | 9000 | 8000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8×16,8×20 | 9000 | 9000 | 9000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10×16,10×20,10×25 | 9000 | 10000 | 9000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | φD≥12.5 | 10000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Stability Impedance Ratio(MAX) | <table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td></td> </tr> </table> | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (120Hz) | Z(-25°C)/Z(20°C) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | Z(-40°C)/Z(20°C) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | |
| Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

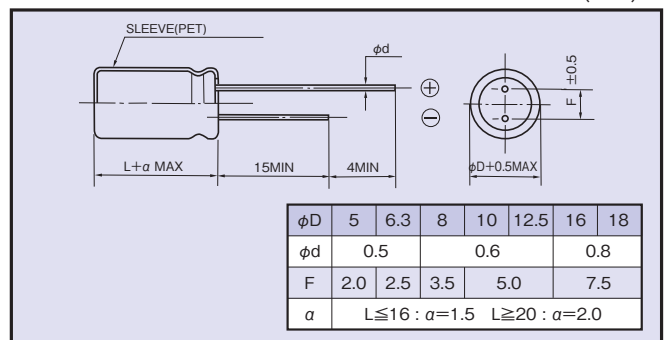
◆MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

| (Hz) Frequency | 120 | 1k | 10k | 100k≤ |
|----------------|------|------|------|-------|
| 8.2~33µF | 0.42 | 0.70 | 0.90 | 1.00 |
| 47~270µF | 0.50 | 0.73 | 0.92 | 1.00 |
| 330~680µF | 0.55 | 0.77 | 0.94 | 1.00 |
| 820~1800µF | 0.60 | 0.80 | 0.96 | 1.00 |
| 2200~8200µF | 0.70 | 0.85 | 0.98 | 1.00 |

◆DIMENSIONS

(mm)



◆OPTION

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

◆PART NUMBER



◆ STANDARD SIZE

| Rated Voltage (V·DC) | Rated capacitance (μF) | Size φD×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | (Ω MAX) Impedance | | Rated Voltage (V·DC) | Rated capacitance (μF) | Size φD×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | (Ω MAX) Impedance | |
|----------------------|------------------------|---------------|--|-------------------|---------------|----------------------|------------------------|---------------|--|-------------------|---------------|
| | | | | 20°C, 100kHz | -10°C, 100kHz | | | | | 20°C, 100kHz | -10°C, 100kHz |
| 6.3 (0J) | 220 | 5×11 | 345 | 0.40 | 1.2 | 25 (1E) | 68 | 5×11 | 450 | 0.40 | 1.2 |
| | 470 | 6.3×11 | 540 | 0.17 | 0.51 | | 150 | 6.3×11 | 700 | 0.17 | 0.51 |
| | 820 | 8×11.5 | 945 | 0.075 | 0.23 | | 330 | 8×11.5 | 1200 | 0.075 | 0.23 |
| | 1000 | 8×16 | 1250 | 0.059 | 0.18 | | 390 | 8×16 | 1600 | 0.059 | 0.18 |
| | 1200 | 10×12.5 | 1330 | 0.053 | 0.16 | | 470 | 10×12.5 | 1700 | 0.053 | 0.16 |
| | 1500 | 8×20 | 1500 | 0.041 | 0.13 | | 560 | 8×20 | 1960 | 0.041 | 0.13 |
| | 1800 | 10×16 | 1760 | 0.038 | 0.12 | | 680 | 10×16 | 2000 | 0.038 | 0.12 |
| | 2700 | 10×20 | 1960 | 0.028 | 0.084 | | 1000 | 10×20 | 2500 | 0.028 | 0.084 |
| | 3300 | 10×25 | 2250 | 0.024 | 0.072 | | 1200 | 10×25 | 2900 | 0.024 | 0.072 |
| | 3900 | 12.5×20 | 2480 | 0.025 | 0.075 | | 1500 | 12.5×20 | 2600 | 0.025 | 0.075 |
| | 4700 | 12.5×25 | 2900 | 0.019 | 0.057 | | 1800 | 12.5×25 | 3200 | 0.019 | 0.057 |
| | 5600 | 12.5×30 | 3450 | 0.018 | 0.054 | | 2200 | 12.5×30 | 3660 | 0.018 | 0.054 |
| | 6800 | 16×20 | 3250 | 0.021 | 0.063 | | 2200 | 16×20 | 3330 | 0.021 | 0.063 |
| | 6800 | 12.5×35 | 3570 | 0.016 | 0.048 | | 2700 | 12.5×35 | 4120 | 0.016 | 0.048 |
| 8200 | 16×25 | 3630 | 0.017 | 0.051 | 3300 | 16×25 | 3810 | 0.017 | 0.051 | | |
| 10 (1A) | 150 | 5×11 | 450 | 0.40 | 1.2 | 35 (1V) | 47 | 5×11 | 450 | 0.40 | 1.2 |
| | 330 | 6.3×11 | 700 | 0.17 | 0.51 | | 100 | 6.3×11 | 700 | 0.17 | 0.51 |
| | 560 | 8×11.5 | 1200 | 0.075 | 0.23 | | 180 | 8×11.5 | 1200 | 0.075 | 0.23 |
| | 680 | 8×16 | 1600 | 0.059 | 0.18 | | 220 | 8×16 | 1600 | 0.059 | 0.18 |
| | 820 | 10×12.5 | 1700 | 0.053 | 0.16 | | 270 | 10×12.5 | 1700 | 0.053 | 0.16 |
| | 1000 | 8×20 | 1960 | 0.041 | 0.13 | | 330 | 8×20 | 1960 | 0.041 | 0.13 |
| | 1200 | 10×16 | 2000 | 0.038 | 0.12 | | 390 | 10×16 | 2000 | 0.038 | 0.12 |
| | 1800 | 10×20 | 2500 | 0.028 | 0.084 | | 560 | 10×20 | 2500 | 0.028 | 0.084 |
| | 2200 | 10×25 | 2900 | 0.024 | 0.072 | | 680 | 10×25 | 2900 | 0.024 | 0.072 |
| | 2700 | 12.5×20 | 2600 | 0.025 | 0.075 | | 820 | 12.5×20 | 2600 | 0.025 | 0.075 |
| | 3300 | 12.5×25 | 3200 | 0.019 | 0.057 | | 1200 | 12.5×25 | 3200 | 0.019 | 0.057 |
| | 4700 | 12.5×30 | 3660 | 0.018 | 0.054 | | 1500 | 12.5×30 | 3660 | 0.018 | 0.054 |
| | 4700 | 16×20 | 3330 | 0.021 | 0.063 | | 1500 | 16×20 | 3330 | 0.021 | 0.063 |
| | 5600 | 12.5×35 | 4120 | 0.016 | 0.048 | | 1800 | 12.5×35 | 4120 | 0.016 | 0.048 |
| 5600 | 16×25 | 3810 | 0.017 | 0.051 | 1800 | 16×25 | 3810 | 0.017 | 0.051 | | |
| 16 (1C) | 120 | 5×11 | 450 | 0.40 | 1.2 | 50 (1H) | 27 | 5×11 | 310 | 0.48 | 1.5 |
| | 270 | 6.3×11 | 700 | 0.17 | 0.51 | | 56 | 6.3×11 | 500 | 0.22 | 0.66 |
| | 470 | 8×11.5 | 1200 | 0.075 | 0.23 | | 100 | 8×11.5 | 950 | 0.12 | 0.36 |
| | 560 | 8×16 | 1600 | 0.059 | 0.18 | | 120 | 8×16 | 1230 | 0.082 | 0.25 |
| | 680 | 10×12.5 | 1700 | 0.053 | 0.16 | | 150 | 10×12.5 | 1280 | 0.073 | 0.22 |
| | 820 | 8×20 | 1960 | 0.041 | 0.13 | | 180 | 8×20 | 1580 | 0.058 | 0.18 |
| | 1000 | 10×16 | 2000 | 0.038 | 0.12 | | 220 | 10×16 | 1650 | 0.053 | 0.16 |
| | 1500 | 10×20 | 2500 | 0.028 | 0.084 | | 330 | 10×20 | 2060 | 0.038 | 0.12 |
| | 1800 | 10×25 | 2900 | 0.024 | 0.072 | | 390 | 10×25 | 2420 | 0.032 | 0.10 |
| | 2200 | 12.5×20 | 2600 | 0.025 | 0.075 | | 470 | 12.5×20 | 2300 | 0.032 | 0.10 |
| | 2700 | 12.5×25 | 3200 | 0.019 | 0.057 | | 680 | 12.5×25 | 2800 | 0.025 | 0.080 |
| | 3300 | 12.5×30 | 3660 | 0.018 | 0.054 | | 820 | 12.5×30 | 3370 | 0.023 | 0.074 |
| | 3300 | 16×20 | 3330 | 0.021 | 0.063 | | 820 | 16×20 | 3070 | 0.026 | 0.084 |
| | 3900 | 12.5×35 | 4120 | 0.016 | 0.048 | | 1000 | 12.5×35 | 3810 | 0.021 | 0.067 |
| 4700 | 16×25 | 3810 | 0.017 | 0.051 | 1000 | 16×25 | 3510 | 0.022 | 0.070 | | |

◆ STANDARD SIZE

| Rated Voltage (V·DC) | Rated capacitance (μF) | Size φD×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | (Ω MAX) Impedance | | Rated Voltage (V·DC) | Rated capacitance (μF) | Size φD×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | (Ω MAX) Impedance | |
|----------------------|------------------------|---------------|--|-------------------|---------------|----------------------|------------------------|---------------|--|-------------------|---------------|
| | | | | 20°C, 100kHz | -10°C, 100kHz | | | | | 20°C, 100kHz | -10°C, 100kHz |
| 63 (1J) | 18 | 5×11 | 240 | 0.71 | 3.2 | 100 (2A) | 8.2 | 5×11 | 220 | 1.2 | 5.4 |
| | 47 | 6.3×11 | 420 | 0.28 | 1.3 | | 18 | 6.3×11 | 370 | 0.46 | 2.1 |
| | 82 | 8×11.5 | 720 | 0.18 | 0.79 | | 33 | 8×11.5 | 620 | 0.29 | 1.3 |
| | 100 | 8×16 | 990 | 0.13 | 0.58 | | 47 | 8×16 | 780 | 0.20 | 0.90 |
| | 120 | 10×12.5 | 990 | 0.11 | 0.44 | | 56 | 10×12.5 | 780 | 0.17 | 0.66 |
| | 150 | 8×20 | 1200 | 0.096 | 0.43 | | 68 | 8×20 | 1040 | 0.16 | 0.66 |
| | 180 | 10×16 | 1200 | 0.076 | 0.31 | | 82 | 10×16 | 1040 | 0.11 | 0.47 |
| | 270 | 10×20 | 1570 | 0.056 | 0.23 | | 100 | 10×20 | 1430 | 0.084 | 0.34 |
| | 270 | 12.5×16 | 1570 | 0.072 | 0.27 | | 100 | 12.5×16 | 1430 | 0.11 | 0.34 |
| | 330 | 10×25 | 1990 | 0.046 | 0.19 | | 120 | 10×25 | 1620 | 0.069 | 0.28 |
| | 390 | 12.5×20 | 1990 | 0.041 | 0.13 | | 150 | 12.5×20 | 1750 | 0.062 | 0.18 |
| | 470 | 12.5×25 | 2460 | 0.031 | 0.093 | | 220 | 12.5×25 | 2210 | 0.047 | 0.14 |
| | 560 | 12.5×30 | 2760 | 0.028 | 0.084 | | 270 | 12.5×30 | 2400 | 0.042 | 0.13 |
| | 560 | 16×20 | 2380 | 0.032 | 0.096 | | 270 | 16×20 | 1950 | 0.048 | 0.15 |
| | 680 | 12.5×35 | 3040 | 0.024 | 0.072 | | 330 | 12.5×35 | 2600 | 0.036 | 0.11 |
| 820 | 16×25 | 2890 | 0.025 | 0.075 | 390 | 12.5×40 | 2860 | 0.032 | 0.095 | | |
| 80 (1K) | 12 | 5×11 | 220 | 1.2 | 5.4 | 390 | 16×25 | 2430 | 0.038 | 0.12 | |
| | 27 | 6.3×11 | 370 | 0.46 | 2.1 | 390 | 18×20 | 2270 | 0.045 | 0.14 | |
| | 47 | 8×11.5 | 620 | 0.29 | 1.3 | 470 | 16×31.5 | 2640 | 0.032 | 0.095 | |
| | 56 | 8×16 | 780 | 0.20 | 0.90 | 470 | 18×25 | 2500 | 0.036 | 0.11 | |
| | 68 | 10×12.5 | 780 | 0.17 | 0.66 | 560 | 16×35.5 | 2860 | 0.029 | 0.086 | |
| | 82 | 8×20 | 1040 | 0.16 | 0.66 | 560 | 18×31.5 | 2860 | 0.030 | 0.090 | |
| | 100 | 10×16 | 1040 | 0.11 | 0.47 | 680 | 16×40 | 3510 | 0.027 | 0.081 | |
| | 150 | 10×20 | 1430 | 0.084 | 0.34 | 680 | 18×35.5 | 3510 | 0.027 | 0.081 | |
| | 150 | 12.5×16 | 1430 | 0.11 | 0.34 | 820 | 18×40 | 3860 | 0.026 | 0.076 | |
| | 180 | 10×25 | 1620 | 0.069 | 0.28 | | | | | | |
| | 220 | 12.5×20 | 1750 | 0.062 | 0.18 | | | | | | |
| | 270 | 12.5×25 | 2210 | 0.047 | 0.14 | | | | | | |
| | 330 | 12.5×30 | 2400 | 0.042 | 0.13 | | | | | | |
| | 330 | 16×20 | 1950 | 0.048 | 0.15 | | | | | | |
| | 390 | 12.5×35 | 2600 | 0.036 | 0.11 | | | | | | |
| | 470 | 12.5×40 | 2860 | 0.032 | 0.095 | | | | | | |
| | 470 | 16×25 | 2430 | 0.038 | 0.12 | | | | | | |
| | 470 | 18×20 | 2270 | 0.045 | 0.14 | | | | | | |
| | 560 | 16×31.5 | 2640 | 0.032 | 0.095 | | | | | | |
| | 680 | 16×35.5 | 2860 | 0.029 | 0.086 | | | | | | |
| | 680 | 18×25 | 2500 | 0.036 | 0.11 | | | | | | |
| 820 | 16×40 | 3510 | 0.027 | 0.081 | | | | | | | |
| 820 | 18×31.5 | 2860 | 0.030 | 0.090 | | | | | | | |
| 1000 | 18×35.5 | 3510 | 0.027 | 0.081 | | | | | | | |
| 1200 | 18×40 | 3860 | 0.026 | 0.076 | | | | | | | |