

KL series

Features

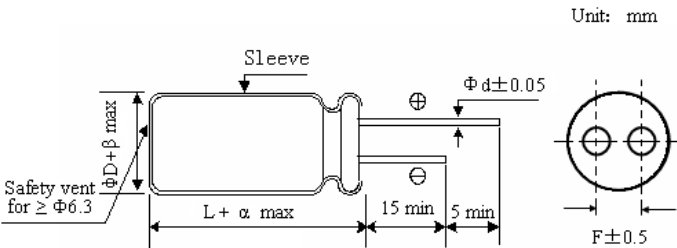
- ◆ High ripple current, Longer life 5000 hours at 105℃.
- ◆ Ideally suited for switching power supplies .
- ◆ RoHS Compliant .



Specifications

| Item | Performance Characteristics | | | | | | |
|--|---|--------------------------------------|-----|-----|-----|-----|-----|
| Temperature Range | -25~+105℃ | | | | | | |
| Rated Voltage Range | 160~450Vdc | | | | | | |
| Capacitance Range | 4.7~220μF | | | | | | |
| Capacitance Tolerance | ±20%（120Hz，+20℃） | | | | | | |
| Leakage Current （+20℃,max.） | I≤0.02CV+30（μA） After 2 minutes, whichever is greater measured with rated working voltage applied | | | | | | |
| Dissipation Factor(tgδ) 120Hz，+20℃ | Working Voltage(Vdc) | 160 | 200 | 250 | 350 | 400 | 450 |
| | D.F(%)max. | 15 | 15 | 15 | 20 | 20 | 20 |
| | For capacitance>1000μF，Add 2% per another 1000μF（120Hz，+20℃） | | | | | | |
| Low Temperature Characteristics(120Hz) | Impedance ratio max. | | | | | | |
| | Working Voltage(Vdc) | 160 | 200 | 250 | 350 | 400 | 450 |
| | Z-25℃/ Z+20℃ | 3 | 3 | 3 | 6 | 6 | 6 |
| For capacitance>1000μF，Add 0.5 per another 1000μF For Z-25℃/ Z+20℃,Add 1.0 per another 1000μF For Z-40℃/ Z+20℃ | | | | | | | |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 5000 hours at 105℃ | | | | | | |
| | Capacitance Change | ≤±20% of the initial value | | | | | |
| | D.F.(tgδ) | ≤200% of the initial specified value | | | | | |
| | Leakage Current | ≤The initial specified value | | | | | |
| Shelf Life | After storing the capacitors under no load at 105℃ for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20℃. | | | | | | |
| | Capacitance Change | ≤±20% of the initial value | | | | | |
| | D.F.(tgδ) | ≤200% of the initial specified value | | | | | |
| | Leakage Current | ≤200%The initial specified value | | | | | |
| Others | JISC-5101(IEC 60384) | | | | | | |

Diagram of Dimensions



Frequency Multipliers

| µF \ Hz | 50/60 | 120 | 300 | 1K | ≥10K |
|---------|-------|------|------|------|------|
| < 220 | 0.80 | 1.00 | 1.25 | 1.40 | 1.60 |
| ≥220 | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |

| | | | | | |
|----|---------------|-----|--------------|-----|-----|
| ΦD | 8 | 10 | 13 | 16 | 18 |
| F | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| Φd | 0.5 | 0.6 | 0.6 | 0.8 | 0.8 |
| α | (L< 20) + 1.5 | | (L≥20) + 2.0 | | |
| β | (D< 20) + 0.5 | | (D≥20) + 1.0 | | |

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Standard Ratings

| Voltage | 160 | | 200 | | 250 | |
|---------|-----------|----------------|-----------|----------------|-----------|----------------|
| Cap(μF) | Case Size | Ripple Current | Case Size | Ripple Current | Case Size | Ripple Current |
| 10 | 10×17 | 90 | 10×17 | 100 | 10×17 | 110 |
| 22 | 10×20 | 140 | 10×20 | 160 | 13×20 | 160 |
| 33 | 10×20 | 190 | 13×20 | 215 | 13×20 | 235 |
| 47 | 13×20 | 290 | 13×20 | 310 | 16×20 | 340 |
| 68 | 13×25 | 380 | 13×25 | 420 | 16×25 | 450 |
| 82 | 16×20 | 420 | 16×25 | 480 | 18×25 | 490 |
| 100 | 16×25 | 520 | 16×25 | 560 | 18×30 | 580 |
| 220 | 18×35 | 870 | 18×35 | 920 | | |

| Voltage | 350 | | 400 | | 450 | |
|---------|-----------|----------------|-----------|----------------|-----------|----------------|
| Cap(μF) | Case Size | Ripple Current | Case Size | Ripple Current | Case Size | Ripple Current |
| 4.7 | | | 10×17 | 65 | 10×17 | 65 |
| 6.8 | 10×17 | 80 | 10×17 | 82 | 10×20 | 85 |
| 10 | 10×20 | 110 | 10×20 | 110 | 13×20 | 130 |
| 22 | 13×20 | 180 | 13×25 | 190 | 16×20 | 190 |
| 33 | 16×20 | 260 | 16×25 | 280 | 16×25 | 290 |
| 47 | 16×30 | 364 | 16×30 | 364 | 18×30 | 380 |
| 68 | 18×30 | 470 | 18×30 | 472 | 18×35 | 472 |
| 82 | 18×35 | 510 | 18×35 | 536 | 18×40 | 550 |
| 100 | 18×40 | 590 | 18×40 | 610 | | |

Max Allowable Ripple Current (mA,rms) at 105℃ 120Hz,Case Size ΦD×L(mm).

Above size is the standard size for our product. If you need special size please contact our sales offices.