# KLJ Series

- Doesn't spark with DC over voltage
- Endurance with ripple current : 2,000 hours at 105℃
- Non solvent resistant type
- ESR value prescribed
- RoHS2 Compliant

Doesn't spark with DC over voltage!

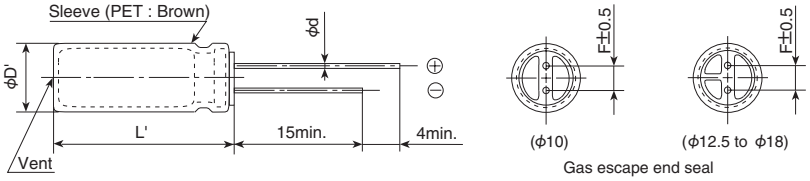
KLJ
↑ Downsized
KLG

## ◆SPECIFICATIONS

| Items | Characteristics | | | | |
|---|---|---|---|---|---|
| Category Temperature Range | -25 to +105℃ | | | | |
| Rated Voltage Range | 200 to 450Vdc | | | | |
| Capacitance Tolerance | ±20% (M) | | | | (at 20℃, 120Hz) |
| Leakage Current | I=0.04CV+100<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) | | | | (at 20℃ after 1 minute) |
| Dissipation Factor (tan δ) | Rated voltage (Vdc) | 200V | 400V | 450V | |
| | tan δ (Max.) | 0.20 | 0.24 | 0.24 | (at 20℃, 120Hz) |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (Vdc) | 200V | 400V | 450V | |
| | Z(-25℃)/Z(+20℃) | 4 | 6 | 6 | (at 120Hz) |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 2,000 hours at 105℃. | | | | |
| | Capacitance change | ≦±20% of the initial value | | | |
| | D.F. (tan δ) | ≦200% of the initial specified value | | | |
| | Leakage current | ≦The initial specified value | | | |
| Shelf Life | The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. | | | | |
| | Capacitance change | ≦±20% of the initial value | | | |
| | D.F. (tan δ) | ≦200% of the initial specified value | | | |
| | Leakage current | ≦500% of the initial specified value | | | |

## ◆DIMENSIONS [mm]

●Terminal Code : E




| φD | 10 | 12.5 | 16 | 18 |
|---|---|---|---|---|
| φd | 0.6 | 0.6 | 0.8 | 0.8 |
| F | 5.0 | 5.0 | 7.5 | 7.5 |
| φD' | φD+0.5max. | | | |
| L' | L+1.5max. | | | |

## ◆PART NUMBERING SYSTEM

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | K | L | J | | | | E | | | | | | M | | | | S |

Supplement code
Size code
Capacitance tolerance code
Capacitance code (ex. 10μF:100,100μF:101)
Lead forming·taping code
Terminal code
Voltage code (ex. 200V:201,450V:451)
Series code
Category

Please refer to "Product code guide (radial lead type)"

## ◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Capacitance(μF) \ Frequency(Hz) | 120 | 300 | 1k | 10k | 50k | 100k |
|---|---|---|---|---|---|---|
| 10μF | 1.00 | 1.35 | 1.75 | 2.30 | 2.50 | 2.70 |
| 15 to 47μF | 1.00 | 1.25 | 1.50 | 1.75 | 1.80 | 1.85 |
| 56 to 330μF | 1.00 | 1.15 | 1.30 | 1.40 | 1.50 | 1.60 |

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

# KLJ Series

## ◆STANDARD RATINGS

| WV ($V_{dc}$) | Cap (μF) | Case size φD×L(mm) | tan δ | ESR (Ωmax/20℃, 100kHz) | Rated ripple current (mArms/105℃, 120Hz) | Part No. |
|---|---|---|---|---|---|---|
| 200 | 33 | 10×20 | 0.20 | 1.8 | 165 | EKLJ201E□□330MJ20S |
| | 39 | 10×25 | 0.20 | 1.4 | 200 | EKLJ201E□□390MJ25S |
| | 56 | 12.5×20 | 0.20 | 1.0 | 265 | EKLJ201E□□560MK20S |
| | 82 | 12.5×25 | 0.20 | 0.72 | 350 | EKLJ201E□□820MK25S |
| | 100 | 16×20 | 0.20 | 0.63 | 390 | EKLJ201E□□101ML20S |
| | 120 | 16×25 | 0.20 | 0.44 | 465 | EKLJ201E□□121ML25S |
| | 150 | 18×20 | 0.20 | 0.31 | 505 | EKLJ201E□□151MM20S |
| | 180 | 16×31.5 | 0.20 | 0.36 | 615 | EKLJ201E□□181MLN3S |
| | 180 | 18×25 | 0.20 | 0.30 | 585 | EKLJ201E□□181MM25S |
| | 220 | 16×35.5 | 0.20 | 0.30 | 695 | EKLJ201E□□221MLP1S |
| | 220 | 18×31.5 | 0.20 | 0.28 | 700 | EKLJ201E□□221MMN3S |
| | 270 | 18×35.5 | 0.20 | 0.24 | 805 | EKLJ201E□□271MMP1S |
| | 330 | 18×40 | 0.20 | 0.21 | 900 | EKLJ201E□□331MM40S |
| 400 | 10 | 10×16 | 0.24 | 5.7 | 64 | EKLJ401E□□100MJ16S |
| | 15 | 10×20 | 0.24 | 4.0 | 105 | EKLJ401E□□150MJ20S |
| | 18 | 10×25 | 0.24 | 3.2 | 110 | EKLJ401E□□180MJ25S |
| | 22 | 12.5×20 | 0.24 | 2.7 | 165 | EKLJ401E□□220MK20S |
| | 27 | 12.5×25 | 0.24 | 1.9 | 200 | EKLJ401E□□270MK25S |
| | 33 | 16×20 | 0.24 | 1.5 | 225 | EKLJ401E□□330ML20S |
| | 39 | 18×20 | 0.24 | 1.2 | 255 | EKLJ401E□□390MM20S |
| | 47 | 16×25 | 0.24 | 1.1 | 290 | EKLJ401E□□470ML25S |
| | 47 | 18×20 | 0.24 | 1.2 | 280 | EKLJ401E□□470MM20S |
| | 56 | 16×31.5 | 0.24 | 0.84 | 340 | EKLJ401E□□560MLN3S |
| | 68 | 16×35.5 | 0.24 | 0.72 | 385 | EKLJ401E□□680MLP1S |
| | 68 | 18×25 | 0.24 | 0.88 | 360 | EKLJ401E□□680MM25S |
| | 82 | 16×40 | 0.24 | 0.65 | 435 | EKLJ401E□□820ML40S |
| | 82 | 18×31.5 | 0.24 | 0.64 | 425 | EKLJ401E□□820MMN3S |
| | 100 | 18×35.5 | 0.24 | 0.54 | 490 | EKLJ401E□□101MMP1S |
| | 120 | 18×40 | 0.24 | 0.49 | 540 | EKLJ401E□□121MM40S |
| 450 | 39 | 16×25 | 0.24 | 1.4 | 265 | EKLJ451E□□390ML25S |
| | 39 | 18×20 | 0.24 | 1.4 | 255 | EKLJ451E□□390MM20S |
| | 47 | 16×25 | 0.24 | 1.3 | 290 | EKLJ451E□□470ML25S |
| | 47 | 18×25 | 0.24 | 1.2 | 320 | EKLJ451E□□470MM25S |
| | 56 | 16×31.5 | 0.24 | 1.1 | 340 | EKLJ451E□□560MLN3S |
| | 68 | 16×35.5 | 0.24 | 0.86 | 420 | EKLJ451E□□680MLP1S |
| | 68 | 18×31.5 | 0.24 | 0.91 | 390 | EKLJ451E□□680MMN3S |
| | 82 | 16×40 | 0.24 | 0.79 | 435 | EKLJ451E□□820ML40S |
| | 82 | 18×31.5 | 0.24 | 0.78 | 425 | EKLJ451E□□820MMN3S |
| | 100 | 18×40 | 0.24 | 0.67 | 490 | EKLJ451E□□101MM40S |
| | 110 | 18×40 | 0.24 | 0.59 | 540 | EKLJ451E□□111MM40S |
| | 120 | 18×45 | 0.24 | 0.58 | 570 | EKLJ451E□□121MM45S |

□□ : Enter the appropriate lead forming or taping code.

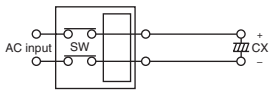
## ◆DC OVERVOLTAGE TEST CONDITIONS

The vent will operate and the capacitor shall become an open circuit without burning materials when the following excess DC voltage is applied.

●Test DC voltage

| Rated voltage | Nominal capacitance | Current limit | Test DC voltage |
|---|---|---|---|
| 200$V_{dc}$ | ＜330μF | 4A | 300/375$V_{dc}$ |
| | 330μF | 5A | |
| 400$V_{dc}$ | ＜100μF | 2A | 500/600$V_{dc}$ |
| | 100μF≦C≦120μF | 4A | |
| 450$V_{dc}$ | ＜100μF | 2A | 550/675$V_{dc}$ |
| | 100μF≦C≦120μF | 4A | |

●Test circuit




Constant DC voltage/current power supply

■ Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.

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