**KLS electronic**
**www.cnkls.com**

## Aluminum Electrolytic Capacitor Series

### KLS10 - CD71 (NP) Series

**Non-Polar Standard**
The polarity can be reversed standard size.
used in circuits what polarity is reversed,such as signal coupling,etc.



X

| Item | Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Size and its tolerance  | ∅D | 5 | 6 | 8 | 10 | 12 | 13 | 16 | 18 |
| | F ± 0.5 | 2.0 | 2.5 | 3.5 | 5.0 | | | 7.5 | |
| | d ± 0.1 | 0.5 | | | 0.6 | | | 0.8 | |
| Operating Temp. Range | -40℃～+85℃ | | | | | | | | |
| Rated Working Voltage | 6.3V～100VDC | | | | | | | | |
| Capacitance Range | 0.47μF～10000μF | | | | | | | | |
| Capacitance Tol. | ±20%,(100Hz.20℃) | | | | | | | | |

**Dissipation Factor tg δ**

At +20℃ and 100 or 120Hz,for $C_R$>1000μF，tg δ add 0.02 per another 1000μF.

| $U_R$ (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|---|---|---|---|---|---|---|---|---|
| tgδ | 0.24 | 0.24 | 0.22 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 |

**Leakage Current IL**

≤0.03·$C_R$·$U_R$ or 5μA whichever is greater
At +20℃,after 2 minutes application of $U_R$

**Load Life**

At +85℃ after $U_R$ applied for 1000 hours.

| △C | ±20% of initial measured value |
|---|---|
| DF(tg δ) | ≤150% of initial specified value |
| LC(IL) | ≤ initial specified value |

**Shelf Life**

At 85℃, after shelf for 500 hours(without voltage applied) , then restored for 16 hours at room temp.

| △C | ±20% of initial measured value |
|---|---|
| DF(tg δ) | ≤150% of initial specified value |
| LC(IL) | ≤200% of initial specified value |

## Case Size of Standard Prosucts

| $C_R$(μF) \ $U_R$(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|---|---|---|---|---|---|---|---|---|
| 0.47 | | | | | | 5×11 | | 5×11 |
| 1 | | | | | | 5×11 | | 5×11 |
| 2.2 | | | | | | 5×11 | | 6×12 |
| 3.3 | | | | | | 5×11 | 5×11 | 6×12 |
| 4.7 | | | | | 5×11 | 5×11 | 6×12 | 6×12 |
| 10 | | | 5×11 | 5×11 | 5×11 | 6×12 | 6×12 | 8×12 |
| 22 | | 5×11 | 5×11 | 6×12 | 6×12 | 8×12 | 8×12 | 10×16 |
| 33 | 5×11 | 5×11 | 5×11 | 6×12 | 8×12 | 8×12 | 10×13 | 13×20 |
| 47 | 5×11 | 5×11 | 6×12 | 6×12 | 8×12 | 10×13 | 10×16 | 13×20 |
| 100 | 6×12 | 6×12 | 8×12 | 8×12 | 10×16 | 10×20 | 13×20 | 16×25 |
| 220 | 8×12 | 8×12 | 10×13 | 10×16 | 13×20 | 13×25 | 16×25 | 18×36 |
| 330 | 8×12 | 10×16 | 10×16 | 13×20 | 13×20 | 16×25 | 16×32 | |
| 470 | 10×12 | 10×16 | 10×20 | 13×20 | 13×25 | 16×32 | 18×36 | |
| 1000 | 10×20 | 13×20 | 13×25 | 16×25 | 16×32 | | | |
| 2200 | 13×25 | 16×25 | 16×32 | 18×36 | | | | |
| 3300 | 16×25 | 16×32 | 18×36 | | | | | |
| 4700 | 16×32 | 18×36 | | | | | | |
| 6800 | 16×36 | | | | | | | |

Note:We can also provide the capacitors according to the customer's request.