

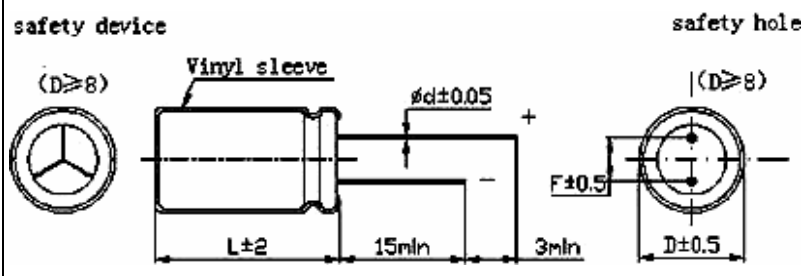
Miniature Standard Capacitors

CD11 Series Miniature Standard

Miniature Standard, Good Stable and reliable performances

D ≥ 8mm equipped with pressure release device

Widely used in DC or pulse circuit of TV, VCD (DVD), Audio systems, Telecommunications and Computers

| Package Discription | | Dimensions | | |
|---|----|------------|---------|----|
| <p>safety device</p>  <p>safety hole</p> | øD | F ± 0.5 | d ± 0.1 | |
| | 5 | 2 | 0.5 | |
| | 6 | 2.5 | | |
| | 8 | 3.5 | | |
| | 10 | 5 | 0.6 | |
| | 12 | | | |
| | 13 | | | |
| | 16 | 7.5 | 0.8 | |
| | 18 | | | |
| | 22 | | | 10 |
| | 25 | 12.5 | | |
| | 26 | | | |

| QUICK REFERENCE DATA | |
|------------------------------------|--|
| DESCRIPTION | VALUE |
| Nominal case sizes (øD x L in mm) | 5 x 11 to 26 x 42 |
| Capacitance Range, C _R | 0.1~10000µF (+20°C, 100 or 120Hz) |
| Operating Temp. Range | -40°C ~ +85°C |
| Rated Working Voltage | 6.3 ~ 450 V _{DC} |
| ΔC/C _R Capacitance Tol. | ± 20%, ⁺³⁰ / ₋₁₀ % (+20°C, 100 or 120Hz) |
| Load Life | 85°C, U _R 1000 |
| | ΔC ≤ ⁺²⁰ / ₋₃₀ % (6.3V _{DC}), ≤ ± 20% (10-100V _{DC}), ≤ ± 15% (160V _{DC}) |
| | tgδ ≤ 200% (≤ 100V _{DC}), 150% (≥ 160V _{DC}) After UR applied for 1000 hours at +85°C: |
| | Capacitance change ΔC ≤ ⁺²⁰ / ₋₃₀ % (6.3V _{DC}), ± 20% (10-100V _{DC}) |
| | ± 15% (≥ 160V _{DC}) of initial measured value. |
| | tgδ ≤ 200% (≤ 100V _{DC}), 150% (≥ 160V _{DC}) of specified value, I _L ≤ specified value. |
| Shelf Life | After shelf for 500 hours (without voltage applied) at +85°C, then restored for 16 hours at room temp. |
| | Capacitance change ΔC and tgδ shall meet specified in "Load Life", I _L ≤ 200% of specified value |
| Type | Radial |
| Leakage Current I _L | ≤ 0.03.C _R .U _R or 5µA (≤ 100V _{DC}) ≤ 0.03.C _R .U _R or 10µA (≤ 160V _{DC}) |

| C _R , U _R AND RELEVANT NOMINAL CASE SIZES(øD x L in mm) | | | | | | | | |
|---|--------------------|---------|---------|---------|---------|---------|---------|---------|
| C _R (µF) | U _R (V) | | | | | | | |
| | 6.3V | 10V | 16V | 25V | 35V | 50V | 63V | 100V |
| 0.1 ~ 0.68 | | | | | | 5 x 11 | | |
| 1 | | | | | | 5 x 11 | | 5 x 11 |
| 2.2 | | | | | | 5 x 11 | | 5 x 11 |
| 3.3 | | | | | | 5 x 11 | | 5 x 11 |
| 4.7 | | | | | 5 x 11 | 5 x 11 | | 5 x 11 |
| 10 | | | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 6 x 12 |
| 22 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 6 x 11 | 8 x 14 |
| 33 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 6 x 12 | 8 x 12 | 10 x 13 |
| 47 | 5 x 11 | 5 x 11 | 5 x 11 | 6 x 11 | 6 x 11 | 6 x 12 | 8 x 12 | 10 x 17 |
| 100 | 5 x 11 | 5 x 11 | 6 x 11 | 6 x 12 | 8 x 11 | 8 x 12 | 8 x 14 | 12 x 22 |
| 220 | 6 x 12 | 6 x 12 | 6 x 12 | 8 x 12 | 8 x 14 | 10 x 17 | 10 x 20 | 16 x 27 |
| 330 | 6 x 12 | 6 x 12 | 8 x 12 | 8 x 14 | 10 x 17 | 10 x 20 | 13 x 22 | 16 x 31 |
| 470 | 6 x 12 | 8 x 12 | 8 x 14 | 10 x 17 | 10 x 20 | 13 x 22 | 13 x 26 | 16 x 36 |
| 1000 | 8 x 12 | 8 x 14 | 10 x 17 | 12 x 22 | 13 x 22 | 16 x 27 | 16 x 31 | 22 x 42 |
| 2200 | 10 x 20 | 12 x 22 | 13 x 22 | 13 x 26 | 16 x 27 | 16 x 36 | 18 x 41 | |
| 3300 | 12 x 22 | 13 x 22 | 13 x 26 | 16 x 27 | 16 x 36 | 18 x 41 | 22 x 42 | |
| 4700 | | 13 x 26 | 16 x 27 | 16 x 36 | 18 x 41 | 22 x 42 | 25 x 42 | |
| 6800 | | | 16 x 36 | 18 x 41 | 22 x 42 | 25 x 42 | 26 x 42 | |
| 10000 | | | 18 x 41 | 22 x 42 | | | | |

| C _R (µF) | U _R (V) | | | | |
|---------------------|--------------------|---------|---------|---------|---------|
| | 160V | 200V | 250V | 400V | 450V |
| 0.1 ~ 0.68 | | | 5 x 12 | | |
| 1 | 5 x 12 | 6 x 12 | 6 x 12 | 8 x 12 | 8 x 12 |
| 2.2 | 6 x 12 | 8 x 12 | 8 x 12 | 8 x 15 | 8 x 15 |
| 3.3 | 8 x 12 | 8 x 12 | 8 x 12 | 10 x 13 | 10 x 17 |
| 4.7 | 8 x 12 | 8 x 12 | 8 x 14 | 10 x 17 | 10 x 17 |
| 10 | 8 x 14 | 10 x 13 | 10 x 17 | 12 x 22 | 12 x 22 |
| 22 | 10 x 15 | 10 x 20 | 12 x 22 | 16 x 27 | 16 x 27 |
| 33 | 10 x 20 | 12 x 22 | 13 x 26 | 16 x 27 | 16 x 31 |
| 47 | 12 x 22 | 13 x 22 | 16 x 27 | 16 x 36 | 16 x 36 |
| 100 | 16 x 27 | 16 x 27 | 16 x 36 | | |
| 220 | 16 x 36 | 18 x 41 | 22 x 42 | | |
| 330 | 18 x 41 | 22 x 42 | | | |
| 470 | 22 x 42 | | | | |

| DISSIPATION FACTOR - tgδ | |
|--------------------------|------|
| U _R (V) | tgδ |
| 6.3 | 0.24 |
| 10 | 0.22 |
| 16 | 0.20 |
| 25 | 0.15 |
| 35 | 0.12 |
| 50, 63 | 0.10 |
| 100 | 0.08 |
| 160 ~ 250 | 0.16 |
| 400 ~ 450 | 0.20 |

Component Disposal Instructions

1. CDIL Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the **Next** Capacitors best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Capacitor(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Capacitor or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s). CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



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