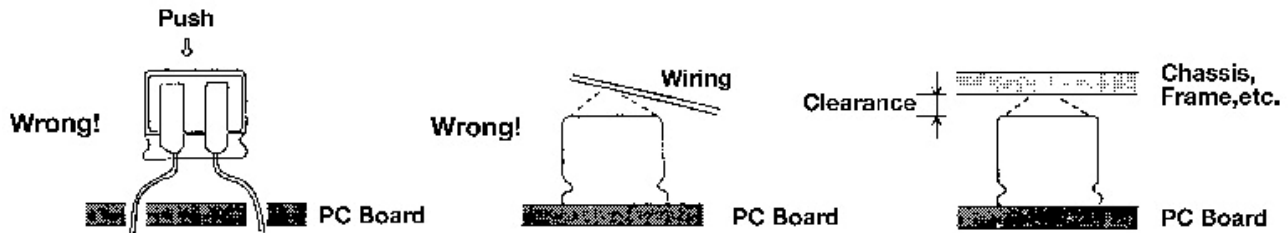


Design Considerations for Capacitor Installation

Designing Circuits Using Non-Solid and Solid Aluminum Electrolytic Capacitors

Explanatory Notes

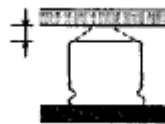
1. Forcibly inserting a capacitor into a PC board when the hole spacing doesn't exactly match the terminal spacing will damage the lead wires or terminals, the capacitor seal and the internal connections to the element. This mechanical stress may cause sealing failure, electrolyte leakage and electrical failures such as a short circuit (non-solid). To avoid this problem capacitors with pre-formed leads are available upon request from United Chemi-Con.



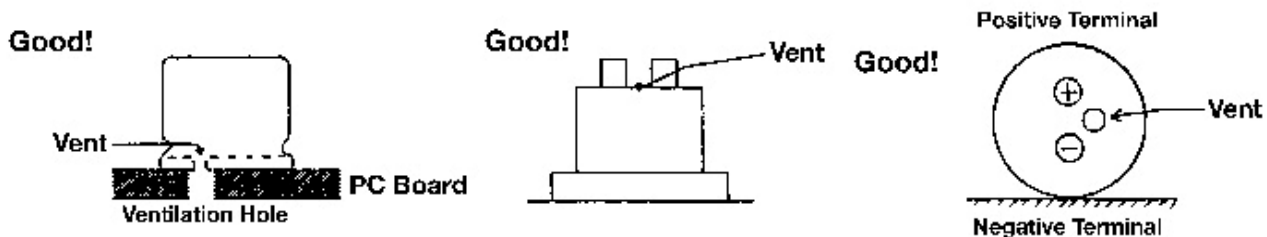
2. Do not locate any wire or copper trace, especially with high voltage or high current, over the safety vent of a capacitor. When the vent opens, hot flammable gas of more than 100°C will escape and may condense into a liquid on circuit traces or melt the insulating material of the wires, causing a fire (non-solid).



3. Provide adequate clearance above the safety vent of capacitors to avoid blocking the operation of the vent. Unless otherwise specified in the product literature, follow the clearance specifications given below. Improper clearance may adversely affect the vent operation and result in an explosion of the capacitor (non-solid).



4. If the ventilation hole in the PC board is not correctly located under the safety vent of the capacitor, the vent will not have adequate space to open properly and the capacitor may explode (non-solid).



5. Screw-insert terminal capacitors have the safety vent located on the terminal end of the capacitor, and a wax-like compound inside the capacitor anchors the element to the terminal tabs. If a capacitor with the screw-insert terminals facing downward is misapplied, the wax-like compound will melt due to excessive heat generated inside the capacitor and could possibly drip down to obstruct the operation of the vent.

If the body of a capacitor with screw-insert terminals is mounted on its side, position the positive terminal upward, the negative terminal downward and the vent to one side (non-solid).

Precaution

1. Provide the appropriate hole spacing on the printed circuit board to match the terminal spacing of a capacitor.
2. Do not locate any wire or copper trace over the safety vent of a capacitor.
3. Provide adequate clearance space above the safety vent of a capacitor.
4. If a capacitor is mounted with its safety vent face down on the printed circuit board, provide a ventilation hole in the board beneath it to let gas escape when the vent opens (Non-Solid).
5. It is not recommended to mount the capacitors with the screw-insert terminals facing down. When mounting them on their side, position the positive terminal upward (Non-Solid).

Footnote

Safety Vent or Pressure Relief Vent: A sensitive area on the aluminum can or sealing cover is designed to readily open when internal gas pressure is too high. In the event of excessive pressure, this vent will rupture and release the internal pressure. Most safety vents have no repetitive function, so they remain open once they have ruptured.