

Capacitors Assembly

Mechanical Assembly

- When using high-capacitance and high-voltage electrolytic capacitors it is important to remember that the inner part (the rolled section) is not insulated from can: between the negative pole and the aluminium can there is a variable and not defined resistance essentially due to the electrolyte used in capacitor manufacture.
- Capacitor mounting must be apt to ensure that the terminals do not point downward (see Fig.13). In case of horizontal mounting the safety vent must be put in the shown position.

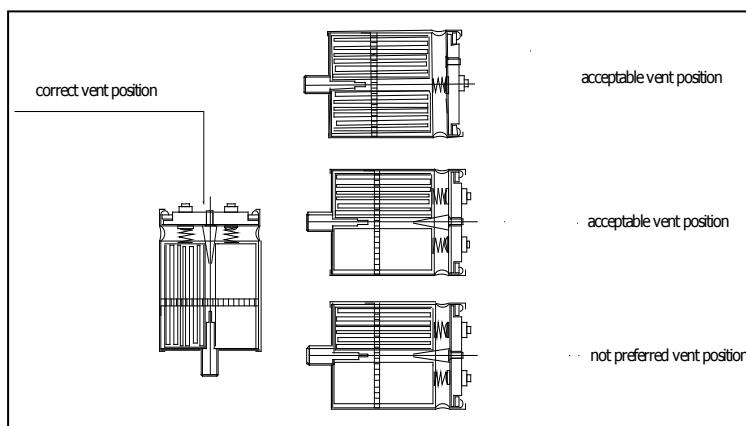


Figure 7

- Do not mount screw terminal capacitors downward : if that the case be sure that there is a venting hole in PC board
- Spacers (paper) and electrolyte present in aluminium electrolytic capacitors are flammable
- The electrolyte used in capacitors production are highly conductive and contains ammonia or ammonium salt in different forms : possibly leaking electrolyte can slowly corrode the copper paths on PC board.

Precautions

When using aluminium electrolytic capacitors a number of precautions must be taken :

- Operating temperature ,ripple current and working voltage must be within the specified limits
- Don't apply any reverse voltage or AC to the capacitors :there could be abnormal increase in temperature and even explosion of unit
- When protection against reverse voltage is required please contact our engineering.
- In any case AC cannot be applied
- Capacitors that undergo (occasionally or purposely) to reverse voltage cannot be used any longer
- DC voltage plus AC component cannot exceed the working voltage of the unit
- Capacitors to be used in areas where there are harmful gases will undergo to a life reduction due to damages that can occur to sealing rubber or to gasket : the damage of these parts can cause the gas enter into the capacitor with consequent corrosion of capacitor's body
- When capacitor is used a highly dusty area check that the level of powders on the top of the unit is not overpassing insert shoulder height to avoid possible short circuit between plus and minus pole

- Moisture or salt spray can penetrate into the capacitor and cause short circuit of the unit
- When mounting screw terminal capacitors see par. 16
- When mounting snap in capacitor with a solder iron the hot tip cannot come in contact with the can, cover material or insulating sleeve
- When units are mounted on series - parallel use homogeneous date codes
- Handling of capacitors must be done carefully : unit falling on the floor or bumping against object can be damaged even when no particular visible modification of unit can be seen; if it happens replace units
- Capacitors cannot be stored under direct sun light
- To avoid electrical shock read carefully par. 6
- When an unit operates for long time at voltage consistently low and then sees an high voltage an increase in temperature must be expected
- When a snap in unit is fixed to the pwb by means of fixing material be sure that the fixing compound do not contain chloride or chemicals that can deliver chlorine during polymerisation process
- Cleaning circuit must be done with safe chemicals (see par. 7)
- Harzadous voltage specially on very high capacitance units is present for up to 60 minutes after disconnection from power supply
- Do not use capacitors having standard design in circuits where charge and discharge cycles have an high repetition rate; specific capacitors can be designed for this application
- When safety vent operates a gas at high temperature is emitted : the gas is driving out from capacitor boby some electrolyte that could damage the PC board or connecting bars not properly insulated from chemical attack.
- When a capacitor in bank fails check all capacitors and replace them : don't replace failed unit only