
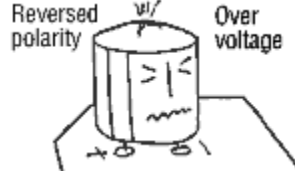














Aluminum electrolytic capacitors

Cautions When Using Aluminum Dielectric Capacitors

Of the numerous types of electronic components, only aluminum electrolytic capacitors are structured in such a way that a liquid is held in the active element. Also, only aluminum electrolytic capacitors have generated vapors from within the active element that must be vented to the outside.

If the aluminum electrolytic capacitor is used improperly, these unusual characteristics can cause severe damage to the electronic product. In order to assure proper usage of the aluminum electrolytic capacitor, be sure to understand and be wary of the following requirements:

Potential Problem Area	Correct	Incorrect	Failure Mode
Polarity Applied voltage			Open (The sudden increase in the internal temperature causes the pressure valve to blow, allowing the electrolyte to vaporize.) Short Reduced life span (internal heat generation)
Ripple current Charging / Discharging Use temperature			Open (The increase in internal pressure causes the pressure valve to blow, allowing the electrolyte to vaporize.)
External forces Terminal pitch			Short (Between the terminal and the electrode foil.) Leak (Damage to seal.)
Bond Hardening			Open (The trapped electrolytic fluid corrodes the capacitor terminals causing an open circuit.)
Pressure valve Operation			Leakage Electrolyte (When there is no space above the valve, the valve does not work, causing the seal rubber to burst.)
Use on double sided circuit boards			Short (When there is leakage electrolyte the copper migration causes a short.)
Substrate cleaning			Open (Contamination with halogen causes corrosion, leading to an open circuit.)