

Failure Modes and Mechanisms of Electrolytic Capacitors

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Abstract

The typical failure modes and mechanisms of two families of electrolytic capacitors (aluminum and tantalum capacitors) are analyzed. Variants such as conductive polymer aluminium capacitors and polymer tantalum capacitors are also included. First, for each family of electrolytic capacitors, after a short description of the design and characteristics, the main applications are described. Then, the typical failure modes and mechanisms are detailed, the main factors that influence the reliability are identified, and some methods for diminishing their action are proposed.

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