

## Capacitors Introduction

Capacitors are manufactured in a variety of styles. Each uses different construction materials and exhibits different functional characteristics. Capacitors are generally grouped into one of two classifications, electrostatics or electrolytics. Electrostatic capacitor technologies are named for the dielectric material used in their construction, for example ceramic and mica; while electrolytics are named for their anode material (on which the dielectric oxide is formed), for example tantalum and aluminum. No one style has all the superior attributes over any other, and some are better for particular applications. The capacitors in this section are divided into their technology categories as illustrated in [Figure 1](#) of the Capacitor Packaging section. Derating factors vary substantially because each style has different performance characteristics and failure mechanisms.

The various Capacitor sections present general comparison information between all capacitor styles, and the capacitor Derating section present specific derating and application information for each capacitor category. Detailed information is available from capacitor manufacturers and MIL-HDBK-198.