

An aluminum plate (1) having an aluminum purity of not less than 99.98% by mass and an Fe content of 5 to 50 ppm with the balance consisting of unavoidable impurities is used to realize increased capacitance of an aluminum electrolytic capacitor, reduced height, and improved high frequency characteristics. In this aluminum plate (1), the total content of Fe in crystal/precipitate is 1 to 50% based on the original content, and the thickness of the aluminum plate is 0.2 to 1 mm. In the formation of a capacitor anode, the aluminum plate (1) is subjected to alternate current etching so as to leave a core part (2) having an average thickness of 50 to 150 μm in the center part in the thickness-wise direction to increase the surface area, followed by anodic oxidation.