

LOW VOLTAGE DRIVE FERROELECTRIC CAPACITOR AND METHOD OF MANUFACTURING SAME

ABSTRACT

A method of forming a low-voltage drive thin film ferroelectric capacitor includes the steps of depositing a ferroelectric and platinum thin film dielectric layer over a bottom electrode, annealing the dielectric layer, wherein a nanocomposite layer is formed including nanoparticles of platinum and forming a top electrode over the dielectric layer. An integrated circuit is also provided including a ferroelectric capacitor. The capacitor includes a bottom electrode formed over a substrate and a ferroelectric and platinum thin film nanocomposite dielectric layer formed over the bottom electrode, wherein the nanocomposite layer includes nanoparticles of platinum. A top electrode is formed over the dielectric layer.

FIG. 3