

GaN Based Schottky Diode For Read/Write Memory And The Method Of Forming Gd Schottky Contact

Title:

GaN based schottky diode for read/write memory and the method of forming Gd schottky contact

The present invention discloses a non-volatile memory device using Gd/AlGaN Schottky diode. The proposed invention comprise of depositing Gd/ Au on AlGaN layer to form a schottky contact and annealing the device. A capacitance-voltage hysteresis is observed, which is found to be reproducible across devices processed and measured under various conditions. The hysteretic nature of the characteristics gives rise to a voltage dependent capacitance window. Deep level traps due to Gd may be potentially responsible for the observed characteristics. The capacitance window is found to remain the same for a very long period of time.

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