A Novel Sensing Scheme for a MRAM with a 5% MR Ratio

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A novel sensing scheme for a magneto-resistive random access memory (MRAM) with a twin cell structure is proposed. It operates by sensing the difference in voltage between a couple of magnetic tunnel junctions (MTJ) in a transitional state. This method can achieve a MRAM with simple circuits, even if the magneto-resistance (MR) ratio is lower than 10%. Moreover, it features good endurance against the dispersion of device characteristics.