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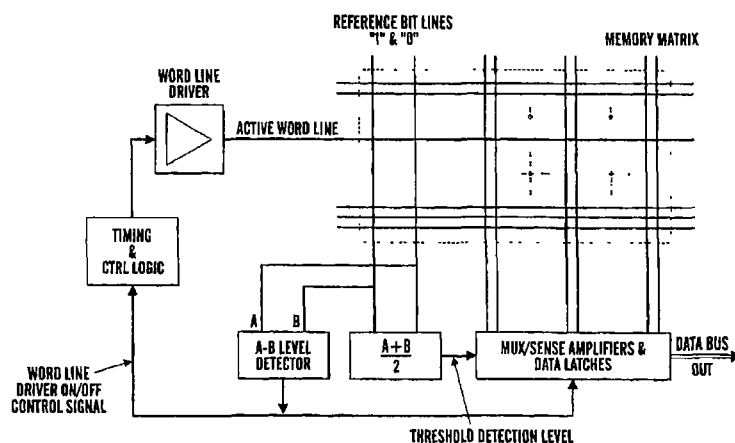
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(54) Title: A METHOD FOR PERFORMING WRITE AND READ OPERATIONS IN A PASSIVE MATRIX MEMORY, AND APPARATUS FOR PERFORMING THE METHOD



(57) **Abstract:** In a method for performing read and write operations in a passive matrix-addressed memory array of memory cells comprising an electrically polarizable material exhibiting polarization remanence, in particular an electret or ferroelectric material, wherein a logical value stored in a memory cell is represented by an actual polarization state in the memory cell, a degree of polarization in the polarizable material is limited during each read and write cycle to a value defined by a circuit device controlling the read and write operations, with said value ranging from zero to an upper limit corresponding to saturation of the polarization and consistent with predetermined criteria for a reliable detection of a logic state of a memory cell. An apparatus for performing write and read operations in a passive matrix-addressed memory array encompassed by the apparatus and comprising memory cells containing an electrically polarizable material exhibiting polarization remanence, in particularly a ferroelectric material, comprises circuitry which adjusts an application of voltages for addressing the memory cells in order to limit a degree of polarization change in the polarizable material during each read and write cycle to value defined by a circuit controlling said read and write operations

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