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(54) Title: GROUND LEVEL PRECHARGE BIT LINE SCHEME FOR READ OPERATION IN SPIN TRANSFER TORQUE MAGNETORESISTIVE RANDOM ACCESS MEMORY

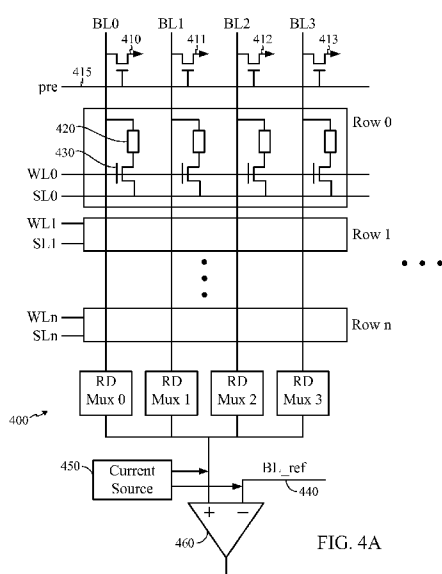


FIG. 4A

(57) Abstract: Systems, circuits and methods for read operations in Spin Transfer Torque Magnetoresistive Random Access Memory (STT-MRAM) are disclosed. A plurality of bit cells, each coupled to one of a plurality of bit lines, word lines and source lines are provided. A plurality of precharge transistors corresponding to one of the plurality of bit lines are configured to discharge the bit lines to ground prior to a read operation.

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