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MAGNETIC TUNNEL JUNCTION MAGNETORESISTIVE READ HEAD WITH LONGITUDINAL AND TRANSVERSE BIAS

ABSTRACT

A magnetic tunnel junction magnetoresistive read head has one fixed ferromagnetic layer (320) .and one generally rectangularly shaped sensing ferromagnetic layer (100) on opposite sides of the tunnel barrier layer, and a biasing ferromagnetic layer (320) located around the side edges and back edges of the sensing ferromagnetic layer (100) An electrically insulating layer separates the biasing layer (320) from the edges of the sensing layer (100). The biasing layer (320) is a continuous boundary biasing layer that has side regions and a back region to surround the three edges of the sensing layer (100). When the biasing layer (320) is a single layer with contiguous side and back regions its magnetic moment can be selected to make an angle with the long edges of the sensing layer (100).

FIG.8

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