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MAGNETORESISTIVE HEAD

ABSTRACT

Electrically conductive protective devices provide a current path shunting the magnetoresistive (MR) sensor element (35) in a magnetic head assembly (21) to discharge static electrical charges without damage to the MR sensor element. A variable conductance device (80) having a non-linear current-voltage characteristic, such as a pair of Schottky diodes, for example, is connected between the MR sensor element leads in parallel with the MR sensor element or between each MR sensor element lead and a ground reference, the MR sensor element magnetic shields, for example, to provide a discharge current bypass path. Alternatively, one or more bleed resistors (133) are connected between the MR sensor element leads and a ground reference to provide the current bypass path thus allowing any static charge to bleed off.

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