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(54) Title: SHIELDED MAGNETORESISTIVE HEADS WITH CHARGE CLAMP

(57) Abstract

An MR or GMR head is described which solves a head spiking problem with a charge clamp structure which provides a noninsulating electrical path from a conducting shield to an MR element lead to prevent charge buildup. Various embodiments of the charge clamp which are described include a centre–tapped resistor which provides an electrical path from the S2 shield (and optionally the S1 shield) to both leads of the MR element to form a self–tracking clamp. Alternatively the resistance configurations described can be duplicated for each shield. A storage system using the invention connects the system's bias circuitry to apply a dc bias voltage on the MR elements leads which in turn are electrically connected to the shield.

