

**LOW MOMENT/HIGH COERCIVITY PINNED LAYER FOR
MAGNETIC TUNNEL JUNCTION SENSORS**

ABSTRACT

A magnetic tunnel junction (MTJ) device (400) is usable as a magnetic field sensor in magnetic disk drives or as a memory cell in a magnetic random access (MRAM) array. The MTJ device (400) has a ferromagnetic antiparallel (AP)-pinned layer (420) comprising a first ferromagnetic layer (428), a second ferromagnetic layer (430) and an antiparallel coupling (APC) layer (424) disposed between the first (428) and second (430) ferromagnetic layers, a free ferromagnetic layer (410) and an insulating tunnel barrier layer (415) disposed between the first ferromagnetic layer (428) of the AP-pinned layer (420) and the free ferromagnetic layer (410).

FIG 4



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