

- [54] **AMORPHOUS MAGNETIC THIN FILMS WITH HIGHLY STABLE EASY AXIS**
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[57] **ABSTRACT**

A sputtered thin film of an amorphous material composed of a magnetic transition metal X and element Y plus possibly an element Z has low coercivity for domains in the plane, has a well defined and stable magnetic easy axis which is extremely stable without heating above the Curie point, with a high and flat value of permeability from low frequencies to greater than 10 megahertz. Metal X can include at least one of Fe, Ni, and Co. Element Y can include at least one of Si and B. Element Z can be included composed of Cr, for example.

**45 Claims, 21 Drawing Figures**