

MAGNETIC RECORDING DISK WITH ANTIFERROMAGNETICALLY- COUPLED MAGNETIC LAYER HAVING MULTIPLE FERROMAGNETICALLY-COUPLED LOWER LAYERS

Abstract of the Disclosure

A magnetic recording disk has an antiferromagnetically-coupled (AFC) structure that has an upper ferromagnetic layer (UL), and a lower ferromagnetic layer structure formed of two ferromagnetically-coupled lower layers (LL1, LL2). The UL is antiferromagnetically-coupled to the lower layer structure across an antiferromagnetically-coupling layer. LL1 and LL2 are ferromagnetically coupled across a ferromagnetic coupling layer so the magnetizations of LL1 and LL2 remain parallel in each remanent magnetic state, but are antiparallel to the magnetization of the UL in each remanent magnetic state. The UL has an M_{rt} greater than the sum of the M_{rt} values of LL1 and LL2.

Figure 3