Thermal actuator integrated with head gimbal assembly (HGA) for disc drive device

Abstract

A microactuator for positioning a read/write head of a disc drive device and a method for positioning a read/write head of a disc drive device are provided. The microactuator comprises a plate for mounting a read/write head slider; and at least one actuation element connected to the plate and configured to thermally expand in response to an input current or voltage for adjusting a position of the read/write head slider; wherein the at least one actuation element comprises a composite structure comprising a first structural and heat-conductive material and a second thermal expansion material, and a heating element thermally coupled to the first material.

Figure 4