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(54) Title: VARIABLE GAIN AMPLIFIER WITH TEMPERATURE COMPENSATION FOR USE IN A DISK DRIVE SYSTEM

(57) Abstract

An apparatus and method for estimating an amplitude of a readback signal obtained from a data storage medium and input to a gain modifying amplifier involves sensing an amplifier output signal in response to a readback signal applied to the amplifier. An amplifier control signal is produced which is representative of a difference between the amplifier output signal and a reference signal. A compensation signal associated with a temperature coefficient of amplifier gain is generated, and an estimate signal indicative of the amplitude of the readback signal is produced using the compensation signal. Generating the compensation signal may further involve generating a first compensation signal having a magnitude proportional to absolute temperature and generating a second compensation signal having a magnitude independent of temperature. It includes a variable gain amplifier, a temperature compensation circuit, and a comparator, all of which have an equivalent temperature profile and are provided on a common IC substrate.

