SYSTEM AND METHOD FOR MEASURING RELATIVE AND ABSOLUTE AMPLITUDES OF A SIGNAL READ FROM A DATA STORAGE MEDIUM

ABSTRACT

An apparatus (75) and method for measuring an amplitude of a readback signal obtained from a data storage medium (73) involves transmitting the readback signal to a gain modifying amplifier, such as a variable gain amplifier (VGA) (76), preferably provided in the read channel. A voltage signal (87) associated with a loop gain of the amplification circuitry (76) is sensed and compared with a number of control voltage signals, each of the control voltage signals being associated with a corresponding digital word value. The digital word value associated with a control voltage signal that is equal to the sensed voltage signal (87) represents the relative amplitude of the readback signal. Gain characterization circuitry may further be combined with the readback signal amplitude measuring circuitry (75), preferably in-situ a read channel, to obtain the absolute amplitude of the readback signal.

Fig.3