

**Differential Amplifier Circuit For Use In A
Read Channel For A Magnetic Recording System**

Abstract

Briefly, in accordance with one embodiment of the invention, a circuit
5 comprises: at least one differential amplifier (900). The differential amplifier is
coupled in a circuit configuration so that the differential output voltage signal of the
differential amplifier circuit includes a scalable second-order harmonic component of
the differential input voltage signal applied to the differential amplifier circuit.

Briefly, in accordance with another embodiment of the invention, a method of
10 applying a differential input voltage signal to a differential amplifier circuit to
produce a differential output voltage signal comprises the step of: driving the
differential amplifier circuit so that the differential output voltage signal of the
differential amplifier circuit includes a second-order harmonic component of the
differential input voltage signal.