

ABSTRACT

THE USE OF HOT CARRIER EFFECTS TO TRIM ANALOG TRANSISTOR PAIR

In this invention hot carrier stress of a transistor allows trimming of an offset voltage of an integrated circuit by producing permanent damage to the transistor by means of interface state generation. The hot carrier stress is applied to the integrated circuit for a period of time and the offset voltage is measured. The process is repeated until the offset voltage is within specification. Probe pads are used to allow probing of the circuitry and application of the required voltages. The circuit used to demonstrate the technique is a differential amplifier but offset voltages in other integrated circuits can be adjusted using the method of high voltage stress a transistor. Other high voltage stress techniques like Fowler-Nordheim tunneling can also be used.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)