

**ON-LINE OFFSET CANCELLATION IN FLASH A/D WITH INTERPOLATING
Abstract COMPARATOR ARRAY**

A method for performing an auto-zero function in a flash analog to digital converter ("ADC"), the ADC including a reference voltage circuit, providing a plurality of evenly spaced analog reference voltages, and a plurality of system voltage comparators for comparing an input voltage against the reference voltages and providing an indication of which reference voltage corresponds to the input voltage. In the method the following steps are performed. A plurality of redundant voltage comparators are provided. A subset of the plurality of system voltage comparators are selected. Auto-zero is performed on the selected comparators, and the redundant comparators are used in the place of the selected comparators. The outputs of the main comparator array and the extra comparators are combined to produce a final digital output.

Figure 7B