

### **138. LOW POWER DYNAMIC COMPARATOR FOR HIGH SPEED ADC'S**

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In electronics, a comparator is a device that compares two voltages or currents, and switches its output to larger, smaller or equal. To obtain low power, delay reduction and high performance of the comparator, double tail dynamic comparator is used. Conventional dynamic comparator and conventional double tail comparator are called as regenerative comparators and its power is fully analyzed. Higher power consumption will reduce the life time of the voltage source. The time taken between the executions of the applied input to obtain the output is called delay. In this paper a dynamic comparator is introduced and thus the circuit of a double tail comparator is modified for low power and fast operation even in low supply voltages. In proposed double tail comparator, in order to reduce the complicated design, few transistors are added to strengthen the circuit and results in reduced power and delay time. Power consumption and delay time are significantly reduced in proposed comparator. The Simulation is done in Tanner EDA tool in 250nm Technology.

Index Terms— Double-tail comparator, dynamic clocked comparator.

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