



A new CMOS voltage reference scheme based on V_{th} -difference principle

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RESUMEN

A new CMOS voltage reference, which takes advantage of the temperature dependence of NMOS and PMOS threshold voltages, is presented. Due to the circuit architecture the mobility factor is completely cancelled. It does not use resistors and all transistors works in strong inversion. The circuit is simple, opamp-less and can be implemented in a standard CMOS process. When the input power supply changes from 1.8V to 2.1V and the temperature changes from -20 to 80°C, simulations for the reference circuit using the proposed architecture shows an output voltage of 1.184V and a TFC of 100 ppm/°C.

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