Abstract

Different adder circuits are elementary blocks in many contemporary integrated circuits, which are not only employed to perform addition operations, but also other arithmetic operations such as subtraction, multiplication and division. Full adder is the basic building block of any adder circuit. Area, speed and power are the three main design metrics for any VLSI circuit. In this work, eight different full adders: circuits based on standard (std.) CMOS, CPL, 16-Transistor, DCVSL, PTL, TGA, 14-Transistor and 8-Transistor have been designed and implemented using Tanner EDA simulation tool. In this paper, authors have compared the propagation delay, power consumption and power delay product (PDP) of different full adder circuits by varying supply voltage (Vdd).
References


Relative Performance Analysis of Different CMOS Full Adder Circuits


Index Terms
Computer Science
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Keywords
CMOS full adder   Propagation delay   PDP   DCVS   PTL   Tanner EDA tool.