Abstract

Full subtractor is a combinational circuit that performs subtraction between the three inputs and provides result in difference and borrow outputs. Implementing the MTCMOS technique on this circuit results in reduction of leakage current and power consumption. The proposed Full Subtractor has been designed and simulated using DSCH 3.1 and MICROWIND 3.1 software. The simulation technology used is 45 nm. The simulation level is BSIM advanced level. The proposed design power consumption calculated as 0.341 mW and maximum current $I_{dd\ max}$ equal to 2.420 mA at 0.7 Supply voltages.

References

2. Basha MM., Dr.Ramanaiah KV, Dr.Reddy PR, “Novel energy efficient 1-bit full subtractor at 65nm technology” Electrical, Electronics, Signals, Communication and Optimization


**Index Terms**

Computer Science  
Circuits and Systems

**Keywords**

Full subtractor, MTCMOS, transistor gating, leakage current, power dissipation.