ABSTRACT
Both average power and peak power specifications of a circuit pose serious problems for the prevalent test methods like scan and built-in self-test. This tutorial discusses the problems and solutions for minimizing power dissipation in these test procedures. Hardware approaches and test vector optimization methods are outlined. Power-constrained testing of core-based systems is discussed. Finally, an open problem of finding an efficient test for verifying the power specification of a system is formulated.

Categories & Subject Descriptors
B.7.1 [Hardware]: Integrated Circuits – VLSI (very large scale integration), B.8.1 [Hardware]: Performance and Reliability – Reliability, Testing and Fault-Tolerance

General Terms
Design, Measurement, Reliability, Verification

Keywords
Low-power design, Testing

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