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An approach to design-for-testability automation of analogue integrated circuits using OBIST strategy

Mosin S.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016 IEEE.This paper is mainly focused on the task of design-for-testability (DFT) automation with emphasis on OBIST strategy for analog integrated circuits. The design procedures according to DFT flow are proposed. Three possible structural solutions for reconfiguration of original circuit into oscillator are considered. The set of rules for each solution is prepared as the formal procedures, which can support the automation during DFT flow. The experimental results for three cases demonstrate adequacy of oscillation frequency for revealing catastrophic and parametric faults.

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Keywords

analog circuits, design automation, design-for-testability flow, oscillation-BIST, Reconfiguration circuitry