

عنوان مقاله:

Cumulant-Based Analog Electronic Circuit Fault Detection

محل انتشار:

چهارمین کنفرانس بین المللی مهندسی قابلیت اطمینان (سال: 1395)

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خلاصه مقاله:

Fault Detection of analog circuits is an important problem for electronic circuits designers. The main problem of the most methods is the test cost and time. Statistical-based methods have been able to solve this problem. To fault detection of nonlinear analog circuits, in this paper a new skewness-based method is proposed. In this method a random voltage sources is used to exciting the circuit under test, then the voltage of the certain node is used as an output signal. For the certain random source, the statistical feature of the output signal is related to circuit elements. Thus, we use the skewness of the output as a feature for fault detection. Simulation results show that the proposed method has higher accuracy with respect to references methods.

کلمات کلیدی:

Cumulant, Moment, Fault Detection, Electronic Circuits

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