

Avtomatika i Telemekhanika 1996 N11, pages 174-181

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## Detection of single and multiple errors using the optimal signature analyzer

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### Abstract

The signature analyzers (SA) are widely applied in the systems of built-in testing of digital devices. At the present time, the analyzers designed on the basis of a shift register with linear feedbacks are mostly used. A study of the influence of an error model change on the SA quality is of interest. Assurance of the sequence control using the optimal SA is studied in the cases of single and multiple errors. Quality criteria are introduced that are used for estimation of the optimal SA in the frames of error models. Quality of the usual linear SA is evaluated by the introduced criteria.

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