

一种混合前缀编码的测试数据压缩方法

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摘 要: SOC 测试中的测试数据具有数据量大、游程长等特征, 对此提出一种新的测试数据压缩方法——混合前缀游程编码. 通过改进传统双游程编码思想, 在每一个码组内添加带有特殊前缀的新编码对测试集中的任意长度的 0、1 游程同时进行从变长到变长编码, 达到仅折损一位从而缩小整体编码长度的目的, 同时给出了基于有限状态机的解码器方案. 理论分析和 ISCAS89 电路的实际测试结果验证了该编码方法有着良好的测试压缩效果.

关键词: 双游程编码; 测试数据压缩; 解码

A Hybrid Prefix Encoding Method of Test Data Compression

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Abstract: As the test data in the SOC test has the characteristics of large amount of data and its length, put forward a new test method for data compression - hybrid prefix-run-length encoding. By improving the thought of traditional double run-length coding thought, in each new code added in the group with a special prefix codes to test set of arbitrary length 0 and 1, run simultaneously from longer to variable length coding. By only wreck a code, so as to reduce overall length coding. At the same time decoder scheme based on the finite state machine is presented. The theory analysis and ISCAS89 actual test results show that the coding method has good test compression effect.

Key words: dual run length; test data compression; decode

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