

工程与应用

DFTA在软硬件相关故障诊断中的应用研究

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摘要 软件密集型系统中由于有大量软件的嵌入, 其故障模式发生了变化, 产生了新的软硬件相关的故障模式。在分析软硬件相关故障特征的基础上, 提出了一种基于动态故障树分析方法的故障诊断方案, 并给出了分析方法和步骤。最后通过实例分析, 证明了这种方法的可行性。

关键词 [软硬件相关故障](#) [动态故障树](#) [故障诊断](#)

分类号

DFTA based fault diagnosis of correlative fault between software and hardware

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Abstract

Because of the existence of a great deal of imbedded software, the fault model of software-intensive system is changed, and a new correlative fault between software and hardware appears. This paper analyses the characteristics of the correlative fault between software and hardware firstly, and then a DFTA based fault diagnosis method is proposed. The analyzing process is also present in the paper. In the end, the feasibility of this method is proved by an example.

Key words [correlative fault between software and hardware](#) [Dynamic Fault Tree Analysis \(DFTA\)](#) [fault diagnosis](#)

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