

MEMS版图抽取及系统级模型自动构建技术*

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摘要:

研究了一种抽取版图信息构建系统级模型的技术, 即从标准版图文件中提取结构的几何信息和拓扑信息, 将其转换对应于系统级中的参数化元件库, 并按原始版图拓扑互连, 从而生成基于saber仿真平台的系统级模型文件, 实现了MEMS工艺级到系统级的数据传递, 使用C++编程语言开发了相应的转换接口。通过典型器件——微加速度计和微变形镜的多种结构验证了转换方法的可行性。

关键词: MEMS CAD、工艺级、系统级、抽取

Layout extraction and system-level modeling automatically for MEMS device

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Abstract:

A methodology extracting information from the layout of MEMS device in process-level for construction of the system-level model has been studied, which firstly geometric and topological information of components from the standard layout file were extracted, then these information were transferred and mapped with the MEMS parameterized component library in system-level, Finally, the system-level model of the device based on SaberTM simulator was constructed according to the topology of the original layout. in this way, the data transfer from the process level to the system level is realized, the transfer interface was developed in C++. We validated the feasibility of the transferring method by two kinds of typical MEMS devices—microaccelerator and micromirror.

Keywords: MEMS CAD, process-level, system-level, layout extraction

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