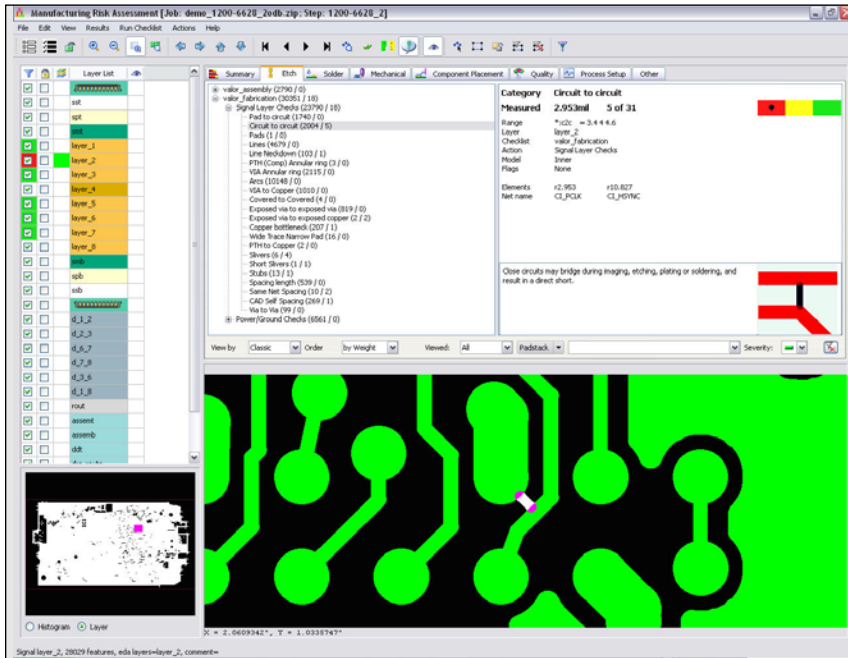


vSure DFM Verification

Resolve manufacturability issues during design to save time and money

System Design Division

D A T A S H E E T



vSure identifies the manufacturing issues and indicates the severity.

Major product features

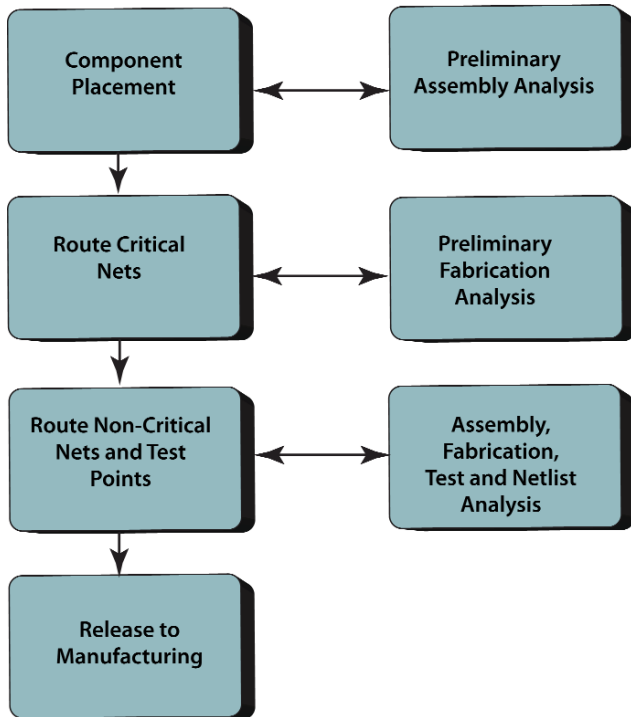
- Minimizes the number of revision spins to bring a new design to production release
- Lowers the cost to manufacture
- Improves the reliability of a design
- Reduces the amount of time spent on supplier “call-backs”
- Works with all major PCB layout tools

Overview

Getting the most competitive product to volume production and to market on time is the responsibility of not only the manufacturer but also the PCB designer. Decisions made in the component selection, placement, and routing of a printed circuit board directly affect the success of New Product Introduction (NPI) process. Any issue found by your supply chain will cause a delay at minimum, or worse, costly scrap. And if designs are reviewed differently by the PCB fabrication and assembly supplier than by the designer using EDA tools, this can significantly increase this risk. As a result, many leading electronic design companies have found that concurrent use of a comprehensive DFM verification tool with their PCB design process saves them expensive revision spins and can improve the quality of the final product.

Concurrent DFM with vSure™

At each successive step of the NPI process, the cost of rectifying a problem increases tenfold. You certainly wouldn't want to find tombstoning caused by traces under a small passive device after you had prototype PCBs fabricated and assembled. Nor would you really want to wait to find the location of manufacturability issues after you have completely placed and routed a PCB and output manufacturing files. It is better to identify and resolve manufacturability issues during the design phase. Concurrent DFM verification with the vSure product is the most efficient manner to incorporate manufacturing optimization into your PCB design process. Identify the opportunity for fabrication and assembly improvement during placement, and avoid having to re-route the PCB. You can even automate the intervals for DFM verification and review results in a timely manner so the design flow is streamlined and efficient. If an error is identified, a single click takes you to the location on your PCB design so that you can remedy the issue.



Concurrent DFM resolves issues at the lowest possible cost.

Comprehensive Analysis

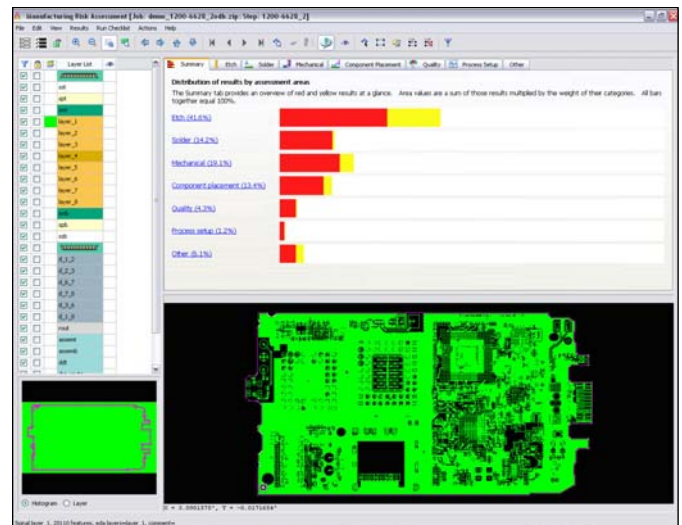
Your DFM process is only as good as the verification tools you use. Today's miniaturized, high-layer count designs cannot be reliably reviewed by manual means. Simple DFM tools do not check for all of the manufacturability issues. Mentor's vSure DFM verification software analyzes your PCB design with more than:

- 275 Fabrication checks
- 250 Assembly checks
- 100 Advanced Substrate checks
- 40 Microvia checks
- 30 Panel checks

In addition, vSure also provides the ability to check your Netlist against the design data to assure there are no fatal errors within this critical step. vSure validates that your BOM matches the design, and that all components in your Approved Vendors List (AVL) are an acceptable physical match.

Design Center Customization

Every design center and every technology type have their own unique requirements regarding manufacturability. From data attribution to manufacturing rules values, you need to be able to run DFM automatically with the least amount of oversight required. vSure uses a Design Center concept to allow customization of the DFM process flow, attribute mapping, component classification, and, the set-up and management of manufacturing rules files. Using a hierarchical approach, you create a master rules model using constants and variables that drive derivative models. This greatly reduces the support requirements for your DFM environment. vSure even provides a default master set compliant with the IPC-7351 standard.



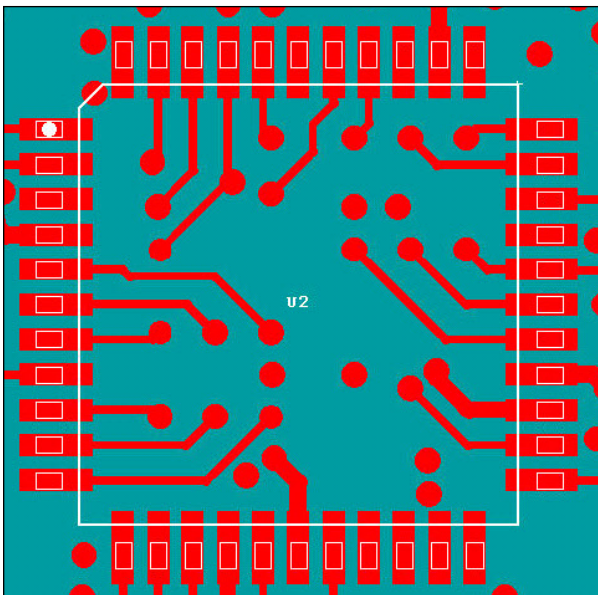
DFM issues are summarized and ranked by severity based on user-weighting.

Understand the Manufacturing Risk

vSure not only identifies where your PCB design is in hard violation of your supplier's manufacturing capabilities, it also shows where yield or field failure issues may occur by using color severity indicators of red, yellow, and green. vSure further categorizes and prioritizes the issues so that you may easily resolve the most critical first. The weight assigned to each check is user-definable, enabling you to apply criteria to how the results are prioritized. After all, your technology and suppliers' processes are likely different than another company's.

An Accurate Library for Accurate Assembly Analysis

The content, consistency and quality of components as they are represented in the CAD data presents challenges for accurate assembly analysis. vSure offers optional access to the Valor Parts Library (VPL), which contains more than 35 million manufacturing part numbers with accurate 2 ½ D “plus” data. The component bodies are drawn according to the manufacturer’s data sheet, adhering to an ISO-9001 certified process and include the length, width and height as well as the pin contact areas. This is the best way to assure optimum solder joints in your design.



VPL provides pin contact area for accurate solder joint analysis.

Synchronized with your supply chain

Unless you and your suppliers perform the same analysis, there is no certainty that your PCB design will not have manufacturability issues. Anything less leaves you with a risk that you have missed something costly. The vSure application was developed by the same people that created the DFM verification tools used by more PCB fabricators and contract assembly companies than any other system. Use the same rules and even the same settings within vSure to simulate how your suppliers will review your design, saving the time spent wondering if you got it right.

Operating Systems Supported

Windows XP, 2003, 2008, Vista, Windows 7
(32 bit & 64 bit)

Red Hat Linux v4.4, v4.6, v5 (32 bit & 64 bit)

HP UX 11i

Solaris 10

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