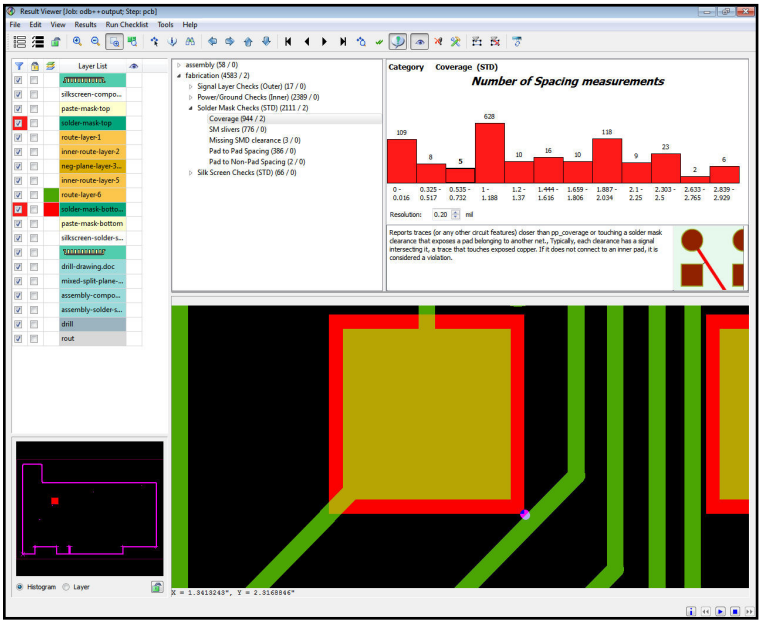
Manufacturing

DATASHEET

DFM Analysis



DFM Analysis within the PADS flow identifies manufacturing issues.

Overview

DFM Analysis, Mentor Graphics' worldwide-leading PCB manufacturing DFM analysis solution, enables PCB design teams to validate that a design is prepared for manufacturing directly within the PADS environment. Regardless of the complexity of their designs, design teams are continuously challenged with getting products into volume production to reach the market quickly. Manufacturers alone cannot identify all production obstacles; PCB designers must play an earlier role in validating the layout of a design by considering key aspects of fabrication and assembly that directly impact manufacturability.

DFM Analysis within the PADS flow

The DFM Analysis incorporates more than 100 of the most valuable fabrication and assembly related analyses. Examples of issues identified by DFM Analysis include resist slivers, unintended copper exposed by soldermask, and testpoint-to-testpoint spacing, all of which delay production. Identifying and solving these issues early in layout, and long before manufacturing, saves costs and brings the product to market much quicker. Catching DFM issues at the design stage is critical because at each successive step of the production process, the cost of rectifying a problem increases tenfold over the previous step. DFM Analysis identifies these manufacturing issues and works seamlessly to take you directly to the design location within PADS Layout.

Major product features:

- Locates manufacturing issues on a design prior to releasing for production
- Reduces production delays by minimizing supplier "call-backs"
- Incorporates more than 100 of the most critical fabrication and assembly related analyses
- Integrates Valor® DFM analysis technology with the PADS flow
- Provides a single-source solution for both PCB design layout and manufacturing validation
- Simple and easy-to-use user interface

Mentor Graphics®

Manufacturing Review

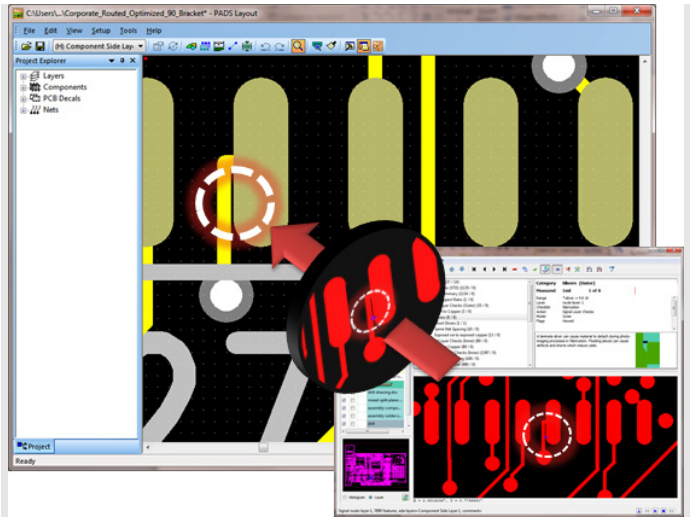
Design issues that would result in increased manufacturing cost or lower yield are quickly identified and corrected with DFM Analysis within the PADS flow before the design enters into even a prototype stage. Designers will quickly process designs through an automated fabrication, assembly, and test verification. Problematic manufacturing conditions are simultaneously reviewed within PADS Layout and DFM Analysis, making it easy to locate and correct manufacturing challenges at the source. The same design-based graphics and identical locations shown in DFM Analysis are automatically displayed in PADS Layout. Corrections can be quickly completed then DFM Analysis moves to the next potential manufacturing challenge requiring resolution.

Synchronize with your Supply Chain

Unless both designers and manufacturers can perform the same analyses, there is no certainty that a design will be free of manufacturability challenges. Without concurrent analysis, there is risk that a costly error can be missed. DFM Analysis has its origins in the same DFM technology used by most PCB fabricators and assembly organizations. DFM Analysis adds manufacturing process rules to traditional design-rule checks by implementing your suppliers' manufacturing requirements within the PADS flow to evaluate the producibility of a design prior to releasing for production. Adding DFM Analysis to the PADS flow reduces manufacturing delays and design-spins, and creates higher-quality designs.

World Class DFM Analysis

DFM Analysis verifies the manufacturability of a design from the suppliers' point of view by identifying challenges often overlooked by today's design-rules checking. In addition to the critical manufacturing copper spacing related DFM analysis, there are additional manufacturing focused analyses performed including, thermal connect reduction, copper slivers, insufficient soldermask coverage, line neckdown, testpoint density, extra solderpaste, component spacing validation, and many more. This comprehensive DFM analysis approach allows production release of a design while minimizing the possibility of manufacturing objections and resulting delays.



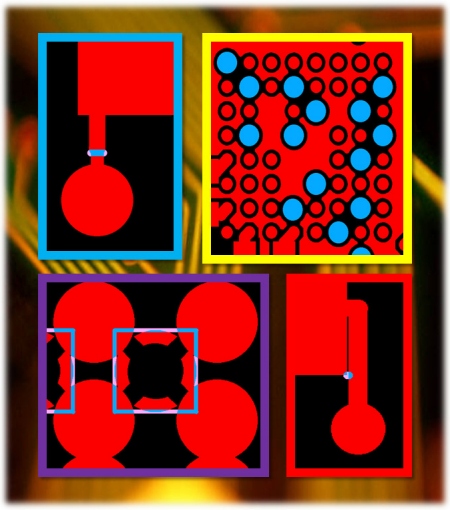
DFM Analysis within the PADS Flow automatically displays manufacturing related challenges within both products, allowing quick corrections within the layout.

Operating Systems and Platform

Windows 7 (32-bit and 64-bit)
Windows Vista SP1 (32-bit)
Windows XP SP3 (32-bit)

Hardware platform: PC
Memory requirements: 1 GB RAM

Disk space requirements: Installation 3 GB



Examples of common manfacturability challenges identified by DFM Analysis, copper neckdown, test point density, lack of power connection and resist slivers.

Visit our website at www.mentor.com/pads

Copyright © 2011 Mentor Graphics Corporation. All rights reserved. Mentor Graphics, PADS and Valor are registered trademarks of Mentor Graphics Corporation.
All other trademarks mentioned in this document are trademarks of their respective owners.

Corporate Headquarters
Mentor Graphics Corporation
8005 SW Boeckman Road
Wilsonville, OR 97070-7777
Phone: 503.685.7000
Fax: 503.685.1204

Systems Design Division
Mentor Graphics Corporation
1811 Pike Road
Longmont, CO 80501
Phone: 720.494.1000
Sales: 888.482.3322
Email: pads_info@mentor.com

09_11 LVG 1029520-w