

VALOR NPI

Speed up the New Product Introduction by reducing errors with DFM

Valor NPI is Siemens' tool that brings actual knowledge of Manufacturing processes - PCB Fabrication and Assembly – directly into the PCB Design flow, allowing DFM analysis to be performed at any time, right up to production release.

You can also find issues as long as you can fix them quickly, rather than later on, shortening the time to market and reducing costs.

Why Choose Valor NPI?

Accelerate New Product Introduction (NPI)

Valor NPI is the tool that allows you to carry out all the necessary Producibility Checks even before making the prototype. By anticipating any issues, you can get to the correct version for actual production faster in the New Product Introduction.

Bridge the gap between Design and Manufacturing

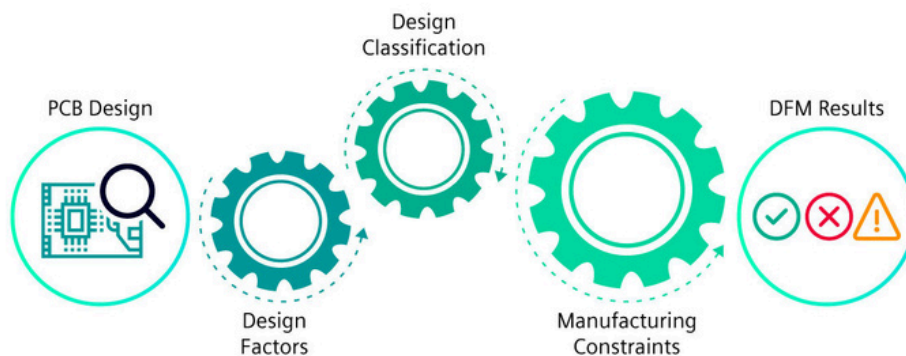
Valor NPI brings factory experience into the Design world, offering Technical Departments a broad set of verifications based on actual manufacturing technologies. In this way, they have analysis tools to correct errors at every stage of the Design flow.

Integrate DFM checks into your Design

Valor NPI is available directly within the Xpedition Layout environment but also integrates with other PCB Design tools. DFM issues can be analyzed based on more than 1,000 criteria, related to both Manufacturing and Assembly.

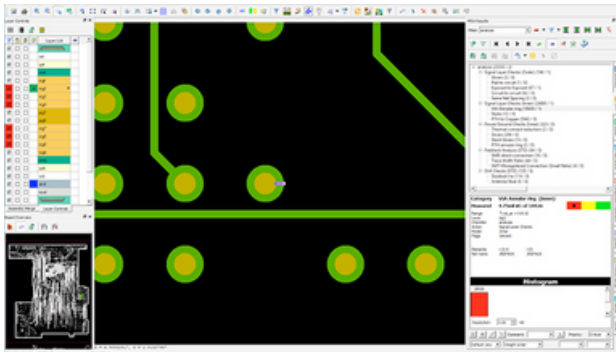
It reduces errors and improves the quality

Thanks to the availability of DFM tools at every stage of the process, it is possible to identify any type of error or defect early, but also to optimize the design for large-scale production, identifying where low yields or failures in the field can occur.



With Valor NPI, PCB DFM rules are fully integrated into the Design flow, using information that belongs both to the Design itself and to the Production stages (manufacturing and assembly). The design factors drive the classifications, which drive the manufacturing constraints – All based on software knowing the applicable manufacturing processes.

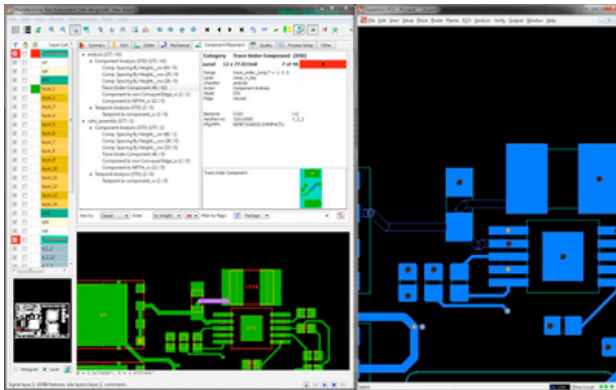
PCB Design Factors



Factors are characteristics of the PCB design that can be used to determine the board types, refine constraints rules, and establish which DFM checks need to run. From the EDA data, it is possible to take information like, for example:

- Layer Types
- Spacing Intent
- Conductor Width Intent
- Copper Weight
- Number of Layers

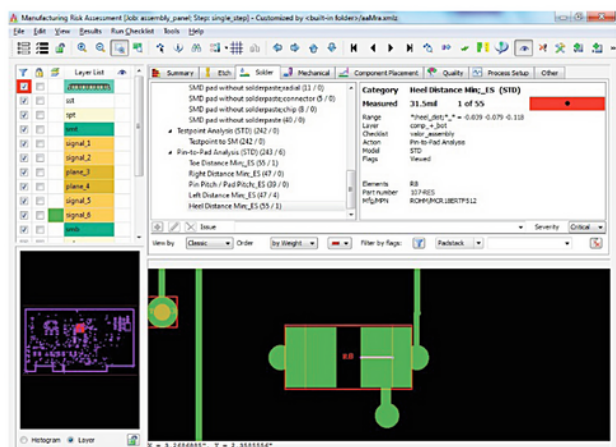
PCB Design Classifications



Different types of boards with different Manufacturing processes require different DFM rules. So the PCB Design can be classified for example by:

- Process Definitions
- Technology Levels such as Standard, Advanced, and Micro-electronics
- Single Sided SMT, Double Sided SMT
- Ground systems, Airborne systems
- IPC Class 1, 2, or 3
- Board characteristics such as typical line width

PCB manufacturing Constraints



Constraints are based on the manufacturing capabilities and design factors. Here we must know what the limits of my manufacturing partners' capabilities are for the manufacturing processes required. For example:

- Copper Spacing
- Annular Ring
- Plane Spacing
- Solder Mask Coverage
- Silk Screen Spacing
- Solder Volume
- Component Spacing
- Component Shadowing
- Test Access