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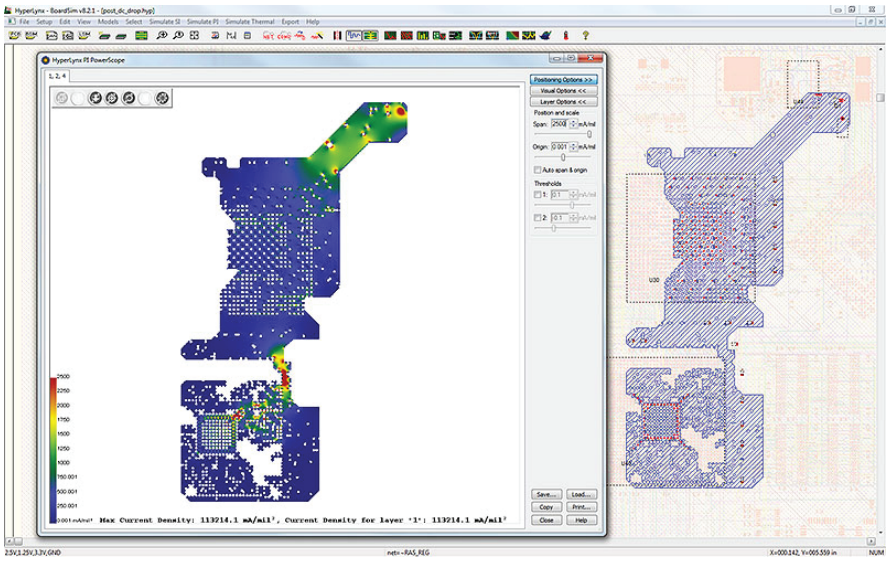
personal automated design solutions

PADS HyperLynx DC Drop



Quickly analyze voltage drop of power supply rails due to copper losses.

MAJOR BENEFITS:

- Easy to use
- Quickly analyzes voltage drop of power supply rails due to copper losses found in power plane shapes, power traces, and neck-downs in dense layouts
- Interactive and batch-mode simulation capability
- Allows easy exploration of different conductor materials and trace thicknesses
- Identifies areas of excessive current density

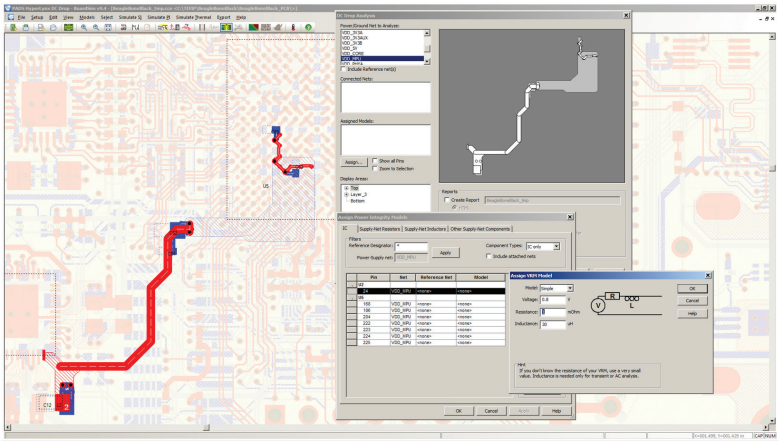
OVERVIEW

Power integrity is one of the biggest problems in electronic product design. Modern ICs, digital and analog alike, require multiple supply voltages to operate. Simultaneously, supply voltages are decreasing and current draw is increasing. Reduced operating margin means new designs are less tolerant of voltage losses in the power delivery network (PDN). Is your PDN sufficient for proper operation?

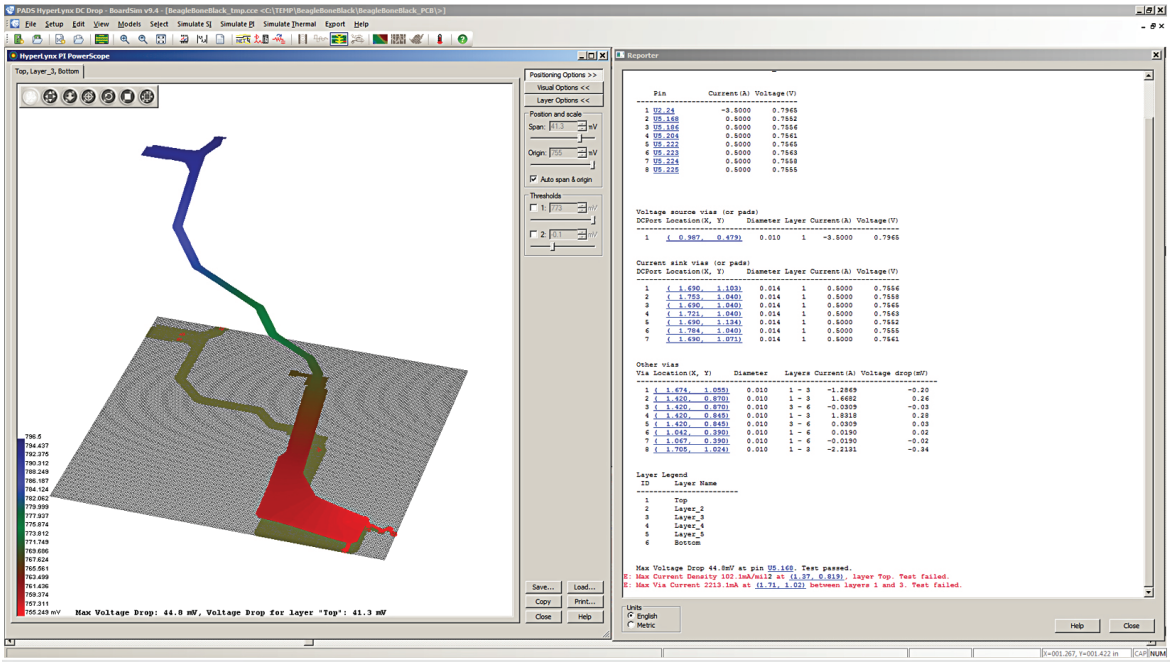
A powerful way to identify and resolve PDN issues is by using PADS® HyperLynx® DC Drop. Hardware engineers, PCB designers, and signal integrity specialists alike can use DC Drop to get simulation results within seconds without requiring weeks of software training. Catching PDN issues early in your product creation process will ultimately help you reduce prototype spins and get to market faster, while creating more reliable devices.

Interactive Simulation Results

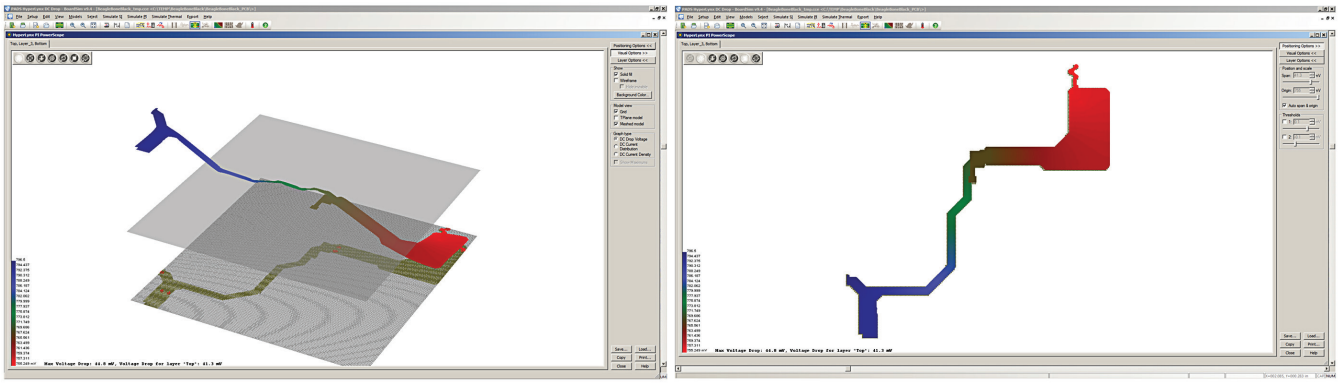
Interactive simulation in DC Drop is easy to use, with simple dialogs that let you simulate your designs quickly. Select a net of interest, assign sink/source values, and obtain simulation results. In addition to the graphical results, you also get a report of all the voltages and currents at all the different pins and vias of your PDN. Each result/violation is hyperlinked to highlight relevant components or pins/vias. In addition to showing voltage loss, the interactive viewer can also show areas of extreme current density.



Interactive simulation makes it a snap to enter and obtain results



Results can be viewed alongside a helpful results window in interactive simulations

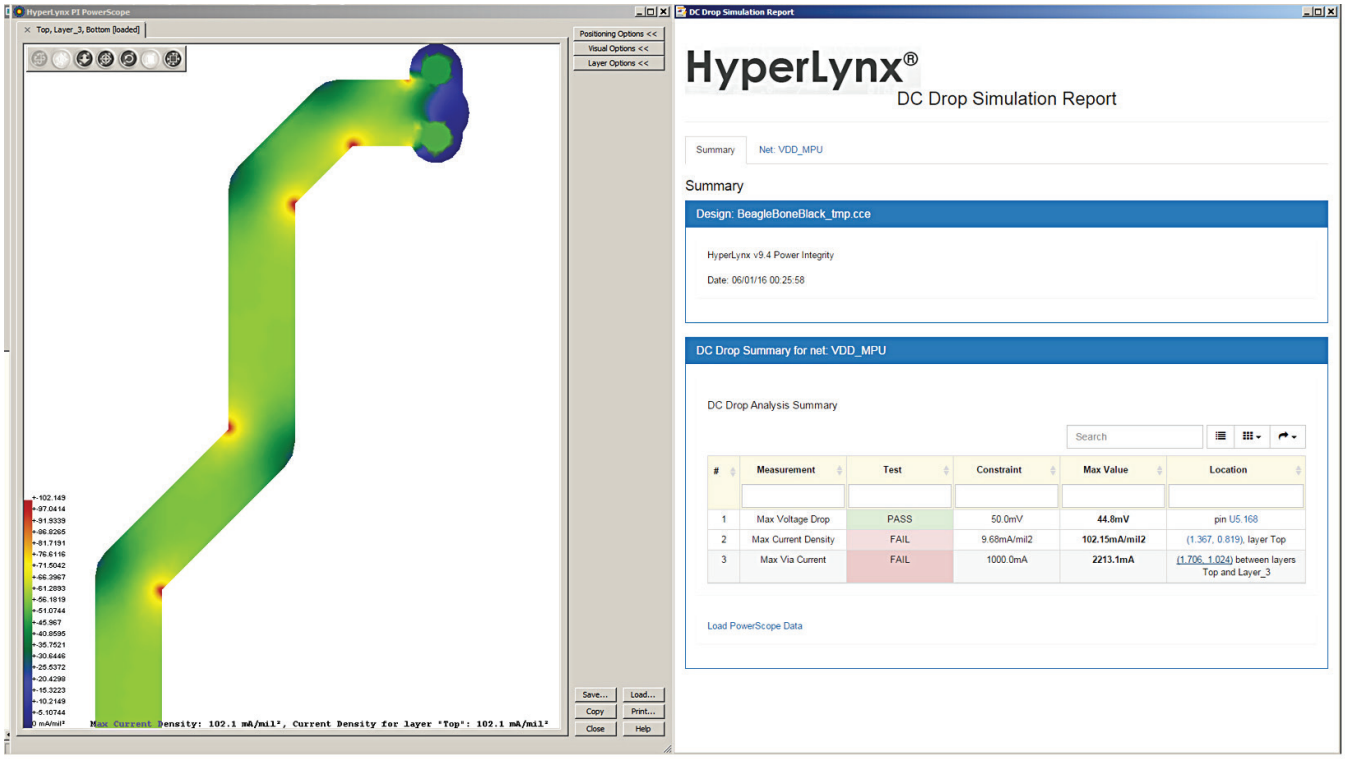


Graphical results of the simulation are available both in 3D (left) and 2D (right). When reviewing the simulation results in 3D, you can add threshold planes to intuitively visualize sections of your PDN that are above/below a target

Mentor Graphics®

Batch-Mode Simulation

Batch-mode simulation lets engineers run, at once, DC drop checks on any number of power supply lines across an entire board. Any model information set up in interactive simulation is retained, while batch-mode dialogs provide the ability to key in data for all supplies at in one dialog entry. A detailed HTML-based report provides clickable links to view violations, and provides a summary of the nets at a glance.



Modern HTML-based report for batch-mode simulation provides detailed data per net as well as filtering and the capability to export data into CSV or XLS formats

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