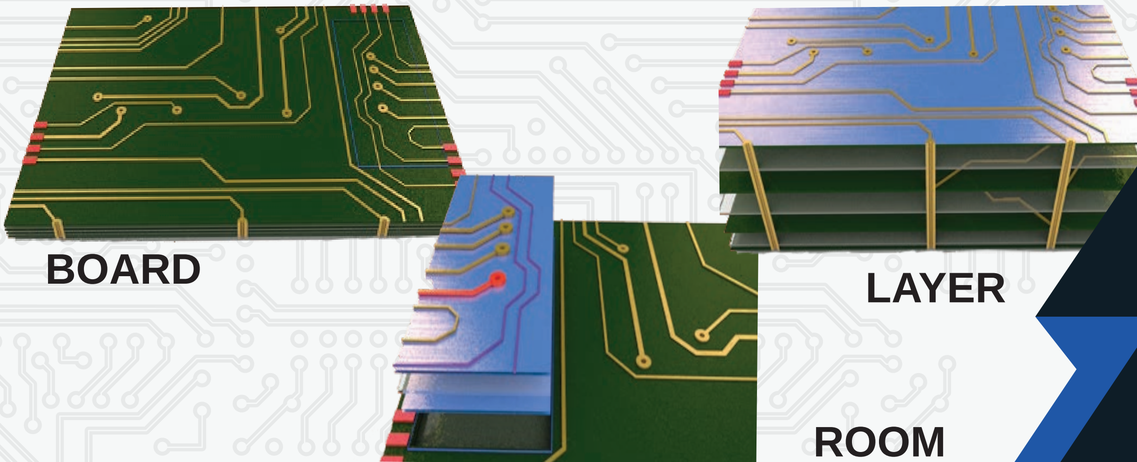
DESIGN RULE MANAGER

The Proteus Design Suite includes a comprehensive design rule system which allows users to quickly and easily define board constraints for their designs. Design rules can be applied to different areas of the PCB and electrical filters can be applied for additional flexibility. This provides a simple but scalable way to control clearances on the PCB.



SELECT THE SCOPE

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APPLY THE FILTERS

- To all objects in the scope
- Between objects in one net class and other net classes
- To traces and pads in a particular net class

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SIMPLE, FLEXIBLE DESIGN RULES

PROTEUS
DESIGN SUITE

BGA Escape

Board Rule (Default)
Layer Rule
Class Rule
Class Layer Rule
Class Class Rule
Class Class Layer Rule
Room Rule
Class Room
Class Class Room Rule

Increasing Priority

Design rules are a vital step in defining the requirements for a PCB. They specify the allowable clearances between objects on the layout and allow the PCB editor to check or enforce these clearances when you are working on the design.

The design rule manager in Proteus is simple, scalable and flexible. Users start with a simple default rule that applies to the entire board and they can then add additional rules via the design rule manager dialogue form.

New rules can be applied to a smaller area of the board and/or they can be applied to a subset of signals such as only to a specific net class.

For example, on a multi-layer PCB you often need less space between objects on inner layers than on the two outer layers. This can be handled by applying rules limited in scope to layers of the board.

Similarly, the pain of routing fanout traces to escape from a BGA is much reduced by the ability to specify a room around the fanout area and then defining a design rule with smaller clearances inside it. In this case, the scope of the rule is reduced to a small area on the PCB.

Meanwhile, on the electrical side it's quite common to assign a power net class filter to a rule. This allows you to ensure adequate space between objects on power nets and the rest of the board.

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