Electroencephalograph (EEG)

Final Project: Electroencephalograph

ELECTRICAL ENGINEERING 40

INTRODUCTION TO MICROELECTRONIC CIRCUITS

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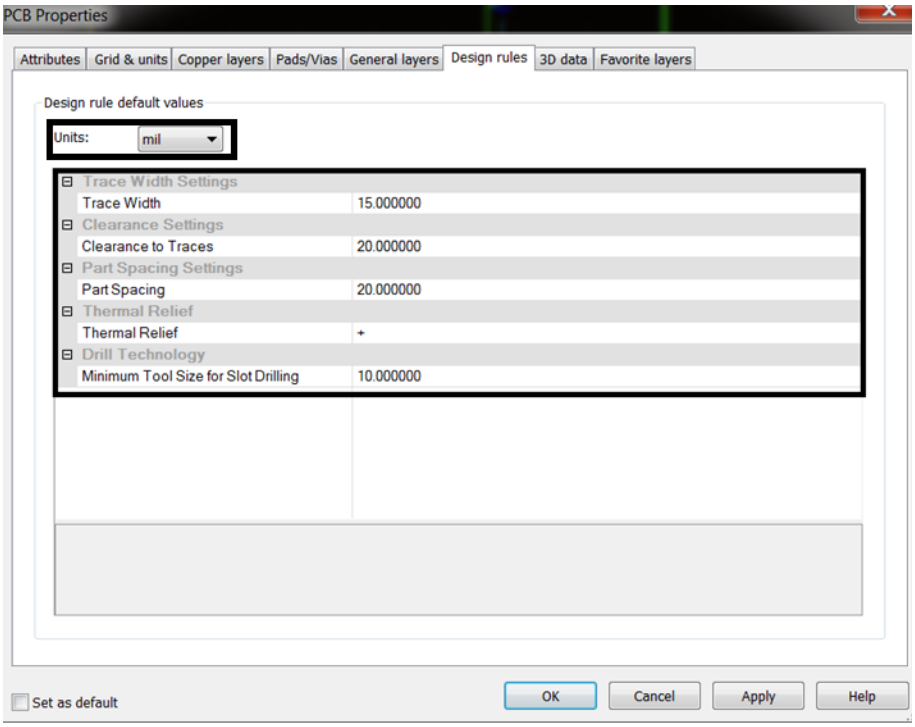
Supplementary Information

For a more robust PCB manufacturing, we have updated our PCB layout specifications as below:

Updated Printed Circuit Board Layout Specifications:

- Your layout be no larger than 5 inches width by 3 inches height
- Your layout may only use circular vias
- Your layout must use IC packages that have the same type of through-hole pads
- Your layout must incorporate test pads at key points in your design
- All components on your printed circuit board must be appropriately labeled with component number (such as “R5” for resistors and “C2” for capacitors).
- Your layout may NOT use surface mounts components except for the voltage regulator if you opt in.
- Your name and your partner’s name, and lab section should be clearly marked on your PCB in a legible manner
- Power traces for supplies and ground must be at least 50 mils wide; other traces must be at least 15 mils wide.
- Your traces and pads must satisfy a minimum of 20 mils clearance with other components
- Using the Autorouter is prohibited. It also does not correctly autoroute consistently so if you do, you probably will lose points
- When you solder the board, you must solder the sockets before putting in the IC chips to avoid heat damage to the chips

BEFORE you actually route your wires, please set up the design rules. In Ultiboard, click “Options”, and select “PCB properties”. Under the tab “Design rules”, you should be able to set your design rules, such as the trace width, clearance etc. Please follow the figure below for your setting. Make sure the units is “mil”.



When you finish all the routing, please do a DRC (design rule check) and Connectivity Check. There should not be any error. If error shows up, you either violate the design rule, or left some wires unrouted. Please fix these errors before you submit your zip file to your GSI.