**PCB**

During the design of the board, we have focused on 3 three important points which are the compactness of the board, the isolation barrier between the primary and secondary, and the proper selected width of the planes and tracks between the connections of the power line. The outcome of the board is given in the APPENDIX. As a summary, the dimension of the board is 66.44mm (Length) x 41.15mm (width) x 43.95mm (height). The isolation barrier between the primary and secondary side is 3.048mm, which is much more than desired one (0.255mm). Finally, the PCB is 4 layers, and both of the inner layers are used to root the grounds and root one or two signals.