

Use the values given in Table 4.1 for these calculations.

#1.) An Silicon wafer is oxidized for 1 hour at 1000 degrees C. Using the Deal and Grove model of oxidation, what is the thickness of the oxide for a (A.) Wet oxidation, and (B.) For a dry oxidation?

#2.) A particular process requires an oxide thickness of 10 μm . At 1000 degrees C, how long would this take for (A) a dry oxide, (B) for a wet oxide, and (C) for a wet oxide at 6400 torr? Your answers should explain why such thick thermal oxides are not practical. Oxides of this thickness are actually deposited by another method we will study later.