ABSTRACT

METHOD FOR PRODUCING BONDED SOI WAFER

The present invention is a method for producing a bonded SOI wafer, the method by an ion implantation delamination method to fabricate a bonded SOI wafer having a BOX layer and a SOI layer on a base wafer and, after performing flattening heat treatment in an argon gas-containing atmosphere, sacrificial oxidation treatment that adjusts the film thickness of the SOI layer is performed, wherein the film thickness of the BOX layer is set so as to be 500 nm or more and a sacrificial oxide film is formed in such a way that the relationship between the film thickness (t) of the SOI layer on which the sacrificial oxidation treatment is to be performed and the film thickness (d) of the sacrificial oxide film which is formed by the sacrificial oxidation treatment satisfies $0.9d > t > 0.45d$. As a result, a method for producing a bonded SOI wafer, the method that can prevent the generation of particles from the outermost peripheral part, which is left in the form of an overhang by flattening heat treatment, of a SOI layer in the production of a bonded SOI wafer, is provided.

FIG. 1