

DESCRIPTION

~~SOI WAFER MANUFACTURING METHOD~~

TECHNICAL FIELD

[0001]

The present invention relates to a method for manufacturing an SOI wafer, especially to a method for manufacturing an SOI wafer required to have extremely high uniformity of the SOI film thickness called FD-SOI (Fully Depleted Silicon-On-Insulator).

BACKGROUND ART

[0002]

Previously, as one of the thinning method of SOI layer of an SOI wafer having the SOI layer, it has been performed a process of subjecting an SOI wafer to heat treatment in a batch processing type heat treatment furnace, thereby oxidizing and modifying Si on the SOI layer surface to an oxide film, and then removing this oxide film (so-called sacrificial oxidation process).

[0003]

For thinning the SOI film thickness precisely to an target value by this method, the thickness of the oxide film have to be accurately controlled so as to be a target value. Actually, however, the oxidation rate changes due to fluctuation of the atmospheric pressure during the oxidation, and it is very difficult to accurately control the oxide film thickness grown by the heat treatment thereby. Accordingly, in film thinning through forming and removing an oxide film, the process has been performed by thinning through forming and removing the oxide film so as to have an SOI film thickness slightly (about 3 nm)

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