Abstract

Epitaxial wafer and production method thereof

PROBLEM

It is an object of the present invention to suppress and prevent epitaxial layer defects generated from voids of a silicon substrate wafer, in the case where hydrogen is added.

SOLUTION

The above problem is solved by a method for producing an epitaxial wafer comprising:

a step of growing a silicon crystal by the Czochralski method comprising adding hydrogen and nitrogen to a silicon melt and growing from the silicon melt a silicon crystal having a nitrogen concentration of from 3×10^{13} cm^{-3} to 3×10^{14} cm^{-3},

a step of preparing a silicon substrate by machining said silicon crystal, and

a step of forming an epitaxial layer at the surface of the silicon substrate.

Fig. 7(a)-(c)