

ABSTRACT

SEED CRYSTAL FOR PULLING SILICON SINGLE CRYSTAL AND METHOD FOR MANUFACTURING SILICON SINGLE CRYSTAL BY USING THE SEED CRYSTAL

Provided is a seed crystal for pulling a silicon single crystal that can reduce generation of slip dislocation due to thermal shock that occurs at the time
5 of contact with a silicon melt, suppress propagation of this slip dislocation, and eliminate dislocation even though a diameter of a neck portion is larger than that in conventional examples. The seed crystal for pulling a silicon single crystal according to the present
10 invention is an improvement in a seed crystal used for pulling a silicon single crystal based on a CZ method, and its characteristics configuration lies in that the seed crystal is cut out from a silicon single crystal pulled from a carbon-doped silicon melt and a
15 concentration of carbon with which the seed crystal is doped is in the range of 5×10^{15} to 5×10^{17} atoms/cm³.

- Fig. 1 -