

ABSTRACT

SiC WAFER PRODUCING METHOD

An SiC wafer producing method includes a modified portion forming step of setting a focal point of a pulsed laser beam having a transmission wavelength to single crystal SiC inside the ingot at a predetermined depth from an end surface of the ingot, the predetermined depth corresponding to the thickness of the wafer to be produced, and next applying the pulsed laser beam to the ingot, thereby forming a small circular modified portion on a c-plane present in the ingot at the predetermined depth, in which the modified portion is a region where SiC has been decomposed into Si and C. The SiC wafer producing method further includes a separation layer forming step of forming a separation layer for separating the wafer from the ingot, the separation layer being composed of a plurality of continuous modified portions each formed by the modified portion forming step and a plurality of cracks isotropically formed on the c-plane so as to extend from each modified portion.

(Figure 4)