

ABSTRACT

SiC WAFER PRODUCING METHOD

Disclosed herein is an SiC wafer producing method for producing an SiC wafer from a single crystal SiC ingot. The SiC wafer producing method includes a modified layer forming step of setting a focal point of a pulsed laser beam having a transmission wavelength to SiC inside the ingot at a predetermined depth from the upper 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 as moving the ingot in a first direction perpendicular to a second direction where an off angle is formed, thereby forming a modified layer extending in the first direction inside the ingot and cracks propagating from the modified layer along a c-plane, a separation surface forming step of indexing the ingot in the second direction and performing the modified layer forming step plural times to thereby form a separation surface inside the ingot, and a wafer producing step of separating a part of the ingot along the separation surface as an interface to thereby produce the wafer.

(Figure 5A)