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(54) Title: METHOD OF SPLITTING A SUBSTRATE

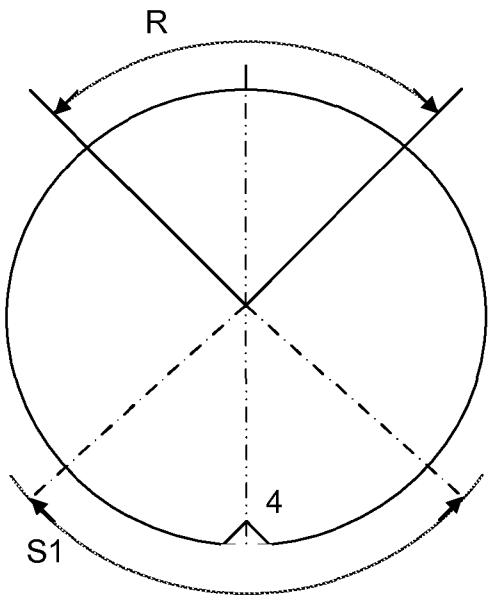


FIG. 5A

(57) Abstract: The present invention relates to a process for splitting a semiconductor substrate having an identification notch (4) on its periphery, which process comprises the steps of: (a) creating a weakened zone in the substrate; (b) splitting the substrate along the weakened zone, the splitting comprising the initiation, in a predetermined sector (R) on the periphery of the substrate, of a splitting wave followed by the propagation of said wave into the substrate, characterized in that: - the weakened zone created in step (a) is obtained by the implantation of atomic species into the substrate, the substrate being held in place on a portion of its periphery, during the implantation, by a fastening device (5), - in that, during the splitting step (b), said portion is placed in the splitting-wave initiation sector (R), and in that during step (b) the notch (4) is positioned so that it is in the quarter (S1) of the periphery of the substrate diametrically opposite the sector (R) for initiating the splitting wave or in the quarter (S2) of the periphery of the substrate centred on said sector (R).

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