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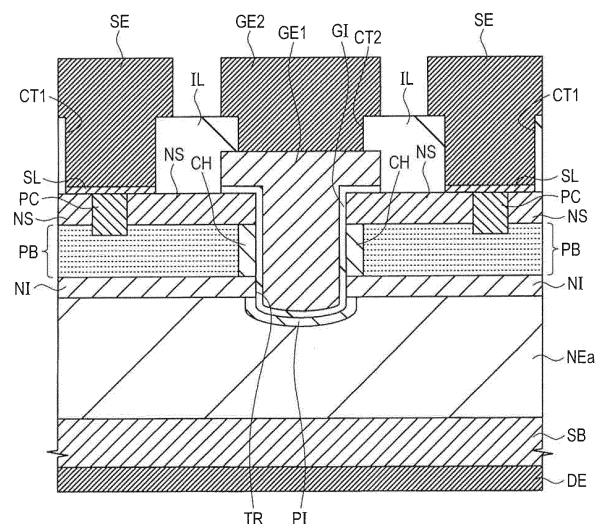
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(54) **SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF**

(57) In a silicon carbide semiconductor device having a trench type MOS gate structure, the present invention makes it possible to inhibit the operating characteristic from varying. A p-type channel layer having an impurity concentration distribution homogeneous in the depth direction at the sidewall part of a trench is formed by applying angled ion implantation of p-type impurities to a p-type body layer formed by implanting ions having implantation energies different from each other two or more times after the trench is formed. Further, although the p-type impurities are introduced also into an n-type drift layer at the bottom part of the trench when the p-type channel layer is formed by the angled ion implantation, a channel length is stipulated by forming an n-type layer having an impurity concentration higher than those of the p-type channel layer, the p-type body layer, and the n-type drift layer between the p-type body layer and the n-type drift layer. By those measures, it is possible to inhibit the operating characteristic from varying.

FIG. 1





EUROPEAN SEARCH REPORT

Application Number
EP 15 18 4684

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The present search report has been drawn up for all claims				
Place of search Munich		Date of completion of the search 11 March 2016	Examiner Lantier, Roberta	
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ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 15 18 4684

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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