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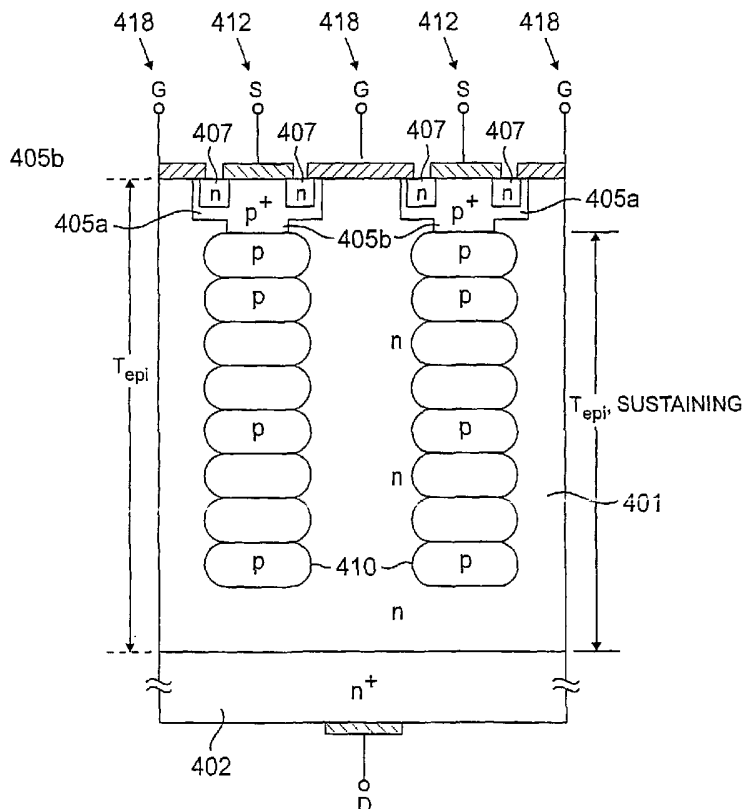
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(54) Title: METHOD FOR FABRICATING A HIGH VOLTAGE POWER MOSFET HAVING A VOLTAGE SUSTAINING REGION THAT INCLUDES DOPED COLUMNS FORMED BY RAPID DIFFUSION



(57) Abstract: A method of fabricating a high voltage power MOSFET having a voltage-sustaining region that includes doped columns (410) formed by rapid diffusion. A semiconductor device having a substrate (402), an epitaxial layer (401) and a voltage-sustaining region formed in the epitaxial layer (401), the voltage-sustaining region including columns (410) formed along at least outer sidewalls of a filled trench, the column (410) including first, second and third diffused regions, the first diffused region having a deeper junction depth than the second diffused region and the third diffused region extends from the surface of the epitaxial layer (401) to intersect one of the first and second diffused regions.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A ✓	US 4,140,558 A (MURPHY et al) 20 February 1979 (20.02.1979), figure 6.	1-22
A ✓	US 5,981,332 A (MANDELMAN et al) 09 November 1999 (09.11.1999), figure 3E.	1-22
A ✓	US 2001/0053568 A1 (DEBOY et al) 20 December 2001 (20.12.2001), figure 16.	1-22
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