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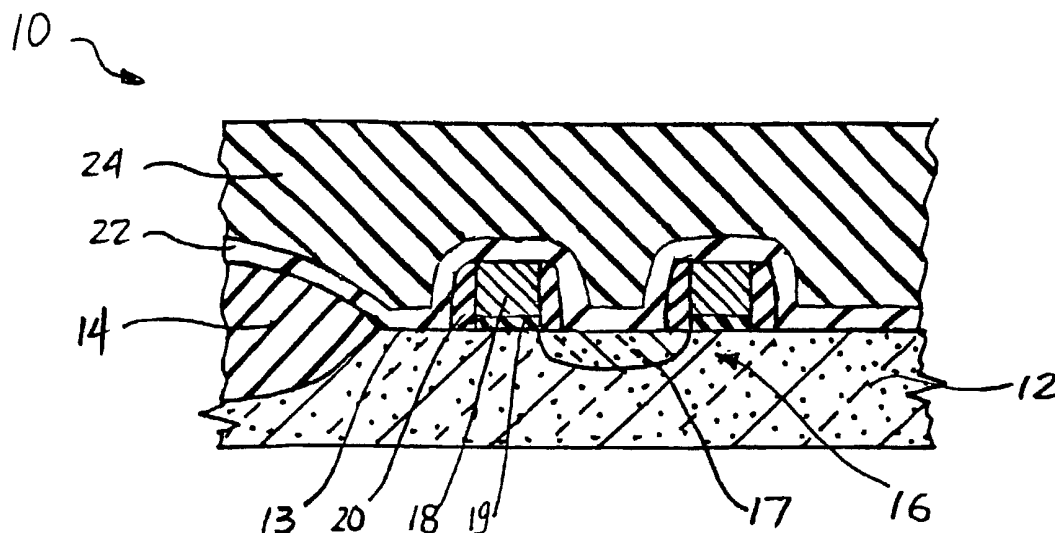
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(54) Title: PROCESS FOR SELECTIVELY ETCHING DOPED SILICON DIOXIDE OVER UNDOPED SILICON DIOXIDE AND SILICON NITRIDE



(57) Abstract: An etchant including $C_2H_xF_y$, where x is an integer from two to five, inclusive, where y is an integer from one to four, inclusive, and where x plus y equals six. The etchant etches doped silicon dioxide with selectivity over both undoped silicon dioxide and silicon nitride. Thus, undoped silicon dioxide and silicon nitride may be employed as etch stops in dry etch processes which utilize the $C_2H_xF_y$ -containing etchant. $C_2H_xF_y$ may be employed as either a primary etchant or as an additive to another etchant or etchant mixture. Semiconductor devices (10) that include structures that have been patterned with an etchant of the present invention or in accordance with the method of the present invention are also disclosed. Specifically, the present invention includes semiconductor devices (10) including doped silicon oxide structures (24) with substantially vertical sidewalls (34) and adjacent undoped silicon oxide or silicon nitride structures (36) exposed adjacent the sidewall (34).



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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 6 018 184 A (BECKER DAVID S) 25 January 2000 (2000-01-25) the whole document ---	1-7
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