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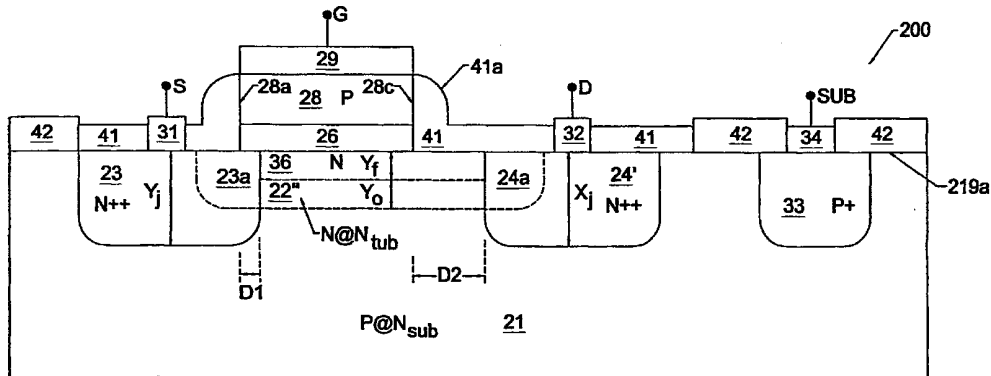
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(54) Title: OFFSET DRAIN FERMI-THRESHOLD FIELD EFFECT TRANSISTORS



(57) **Abstract:** An offset drain Fermi-threshold field effect transistor (Fermi-FET) includes spaced apart source and drain regions in an integrated circuit substrate, and a Fermi-FET channel in the integrated circuit substrate, between the spaced apart source and drain regions. A gate insulating layer is on the integrated circuit substrate between the spaced apart source and drain regions, and a gate electrode is on the gate insulating layer. The gate electrode is closer to the source region than to the drain region. Stated differently, the drain region is spaced farther away from the gate electrode than the source region. The offset drain Fermi-FET can introduce a drift region between the drain region and the Fermi-FET channel that can provide the high voltage and/or high frequency Fermi-FETs, while retaining the Fermi-FET advantages in the channel.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H01L29/78				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H01L				
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				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	PATENT ABSTRACTS OF JAPAN vol. 004, no. 133 (E-026), 18 September 1980 (1980-09-18) -& JP 55 087483 A (FUJITSU LTD), 2 July 1980 (1980-07-02) abstract; figure 5F ---	1-20		
X	PATENT ABSTRACTS OF JAPAN vol. 003, no. 150 (E-158), 11 December 1979 (1979-12-11) -& JP 54 129982 A (FUJITSU LTD), 8 October 1979 (1979-10-08) abstract; figure 3F --- ---	1-20		
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<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. </td> <td style="width: 50%; border: none;"> <input checked="" type="checkbox"/> Patent family members are listed in annex. </td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.
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° Special categories of cited documents :				
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Date of the actual completion of the international search <p style="text-align: center;">30 November 2000</p>	Date of mailing of the international search report <p style="text-align: center;">06/12/2000</p>			
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <p style="text-align: center;">Nesso, S</p>			

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International Application No PCT/US 99/26046

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 990 974 A (VINAL ALBERT W) 5 February 1991 (1991-02-05) cited in the application column 30, line 13 - line 39; figure 15 ----	1-5, 7-11, 13-17, 19,20
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Information on patent family members

International Application No

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