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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.

(54) Title: MOSFET DEVICE HAVING GEOMETRY THAT PERMITS FREQUENT BODY CONTACT

(57) Abstract: A MOSFET device design is provided that effectively addresses the problems arising from the parasitic bipolar transistor that is intrinsic to the device. The MOSFET device comprises: (a) a body region; (b) a plurality of body contact regions; (c) a plurality of source regions; (d) a plurality of drain regions; and (d) a gate region. In plan view, the source regions and the drain regions are arranged in orthogonal rows and columns, and at least a portion of the body contact regions are bordered by four of the source and drain regions, preferably two source regions and two drain regions.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/14623

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01L 29/76, 29/94, 31/062

US CL : 257/341, 342, 401

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)

U.S. : 257/341, 342, 401, 276, 335-346, 401, 368, 503, 505, 508, 528, 554, 573, 584

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,404,013 B1 (CHEN et al) 11 June 2002 (11.06.2002), figures 3, 4.	1-3,6-10,14,15,17-24
Y	US 6,140,167 A (GARDNER et al) 31 October 2000 (31.10.2000), column 2, lines 40-43.	4-5
Y	US 5,972,804 A (TOBIN et al) 26 October 1999 (26.10.1999), column 3, lines 5-7.	4-5
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A		11-13,16,25-27

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

EAST

search terms: body, substrate, tie, contact, mesh, net, checkerboard, diffusion, grid, array, matrix, network, mosfet, fet, transistor, source, drain, surround, surrounding, surrounded, enclose, enclosing, enclosed, gate, ring, shape, shaped