Title: CAPACITOR AND CAPACITOR CONTACT PROCESS FOR STACK CAPACITOR DRAMS

Abstract: A DRAM cell and method of fabrication are provided that eliminate critical photolithography fabrication steps by merging stacked capacitor formation with electrical contacts. The single lithography step can be used to form the electrical contacts (28) because the stacked capacitors (46,48,50) are co-planar with the bit lines (36) and the stacked capacitors are located in the insulating material provided between the bit lines. Unlike conventional capacitor-over-bit line (COB) DRAM cells, this capacitor-beside-bit line DRAM cell eliminates the need to dedicate contacts to the capacitor, making it possible to achieve higher capacitance with lower global topography.

Published: with international search report

Date of publication of the international search report: 8 August 2002

Information about Correction:
Previous Correction:
see PCT Gazette No. 15/2002 of 11 April 2002, Section II
[Continued on next page]
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.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 HO1L21/8242

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 HO1L

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

<table>
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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</table>
| X        | US 6 025 221 A (MICRON TECHNOLOGY INC)  
          15 February 2000 (2000-02-15)  
          column 3, line 62 -column 5, line 43; figures | 1-12                   |
| X        | EP 0 999 585 A (FRANCE TELECOM;ST MICROELECTRONICS SA (FR))  
          10 May 2000 (2000-05-10)  
          the whole document | 1-12                   |
| X        | US 5 895 239 A (VANGUARD INTERNATIONAL SEMICONDUCTOR CORP)  
          20 April 1999 (1999-04-20)  
          the whole document | 1-12                   |

X Further documents are listed in the continuation of box C. X Patent family members are listed in annex.

"A" document defining the general state of the art which is not considered to be of particular relevance.

"E" earlier document but published on or after the international filing date.

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"Z" document member of the same patent family.

Date of the actual completion of the international search

13 February 2002

Date of mailing of the international search report

20/02/2002

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Authorized officer

Sinemus, M
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<tr>
<td>A</td>
<td>US 5 332 685 A (HYUNDAI ELECTRONICS INDUSTRIES CO LTD) 26 July 1994 (1994-07-26) abstract; figures</td>
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