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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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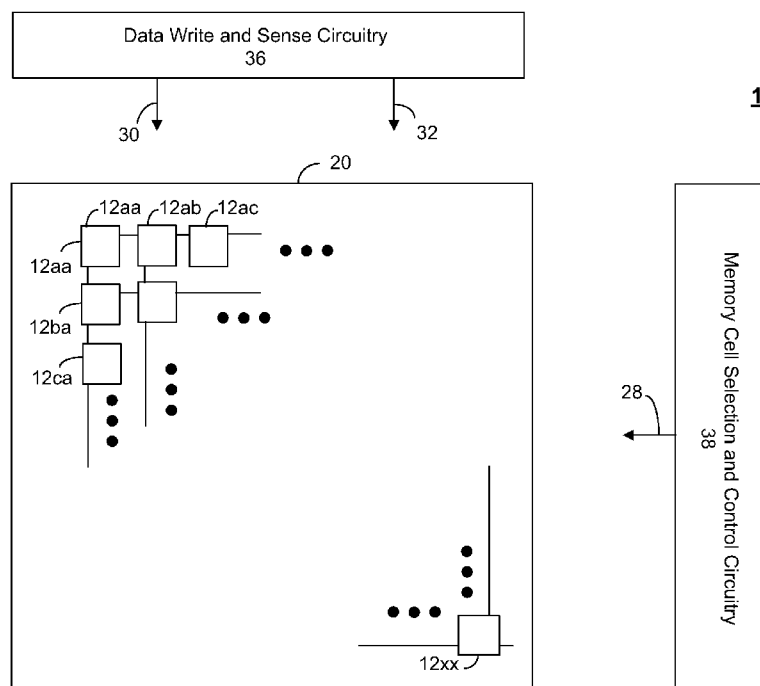
(54) **Title:** TECHNIQUES FOR PROVIDING A SEMICONDUCTOR MEMORY DEVICE

FIGURE 1

(57) **Abstract:** Techniques for providing a semiconductor memory device are disclosed. In one particular embodiment, the techniques may be realized as a semiconductor memory device including a plurality of memory cells arranged in an array of rows and columns. Each memory cell may include a first region coupled to a source line, a second region coupled to a bit line, and a body region capacitively coupled to at least one word line via a tunneling insulating layer and disposed between the first region and the second region.



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A. CLASSIFICATION OF SUBJECT MATTER***H01L 27/115(2006.01)i, H01L 21/8247(2006.01)i***

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)

H01L 27/115; G11C 16/04; G11C 16/06; H01L 29/788

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: semiconductor, memory, array, source, line, bit, body, word, tunnel, insulate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2009-0161441 A1 (MASUOKA FUJIO et al.) 25 June 2009 See paragraphs [0095],[0102]~[0107] claim 1 fig. 6, 21	1-28
A	US 2007-0045709 A1 (Taiwan Semiconductor Manufacturing Co., ltd) 01 March 2007 See paragraphs [0022],[0025],[0033] claims 1, 7, 8 fig. 16A	1-28
A	US 2010-0271880 A1 (CARMAN ERIC) 28 October 2010 See paragraphs [0046]~[0060] claims 1, 4, 5 fig. 3~6	1-28



Further documents are listed in the continuation of Box C.



See patent family annex.

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"&" document member of the same patent family

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