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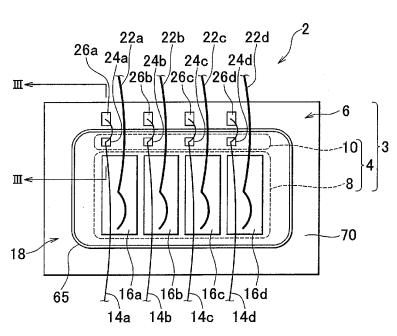
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(54) Title: SEMICONDUCTOR DEVICE AND WIRE BONDING METHOD

F I G . 1



(57) Abstract: A semiconductor device (2) includes: a (65) that is disposed on a field limiting ring (FLR) semiconductor substrate so as to divide the semiconductor substrate into an inner region and an outer region; a first bonding pad (24a to 24d) that is disposed in the inner region and is connected to an external circuit by a wire (14a to 14d) whose one end is connected to the external circuit; and a second bonding pad (26a to 26d) that is disposed in the outer region and on which the other end of the wire is bonded.



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A. CLASSIFICATION OF SUBJECT MATTER INV. H01L23/485 H01L21/60 ADD. H01L29/06 H01L29/739 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 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. Α JP 2004 273647 A (SANKEN ELECTRIC CO LTD) 1 - 1030 September 2004 (2004-09-30) paragraphs [0033] - [0066]; figures 1,2 JP 2005 123388 A (SONY CORP) A 1 - 1112 May 2005 (2005-05-12) paragraphs [0070] - [0079]; figure 6 paragraphs [0017] - [0020], [0030] -[0056] Α US 2004/173820 A1 (KINOSHITA KOZO [JP] ET 1 - 10AL) 9 September 2004 (2004-09-09) paragraphs [0171] - [0178]; figures 18,19 Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not cited to understand the principle or theory underlying the considered to be of particular relevance invention "E" earlier document but published on or after the international 'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another involve an inventive step when the document is taken alone document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docudocument referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled in the art. document published prior to the international filing date but later than the priority date claimed *&* document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 9 June 2009 23/06/2009 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Corchia, Alessandra Fax: (+31-70) 340-3016

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Information on patent family members

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