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[Continued on next page]

(54) Title: ESD CLAMP FOR MULTI-BONDED PINS

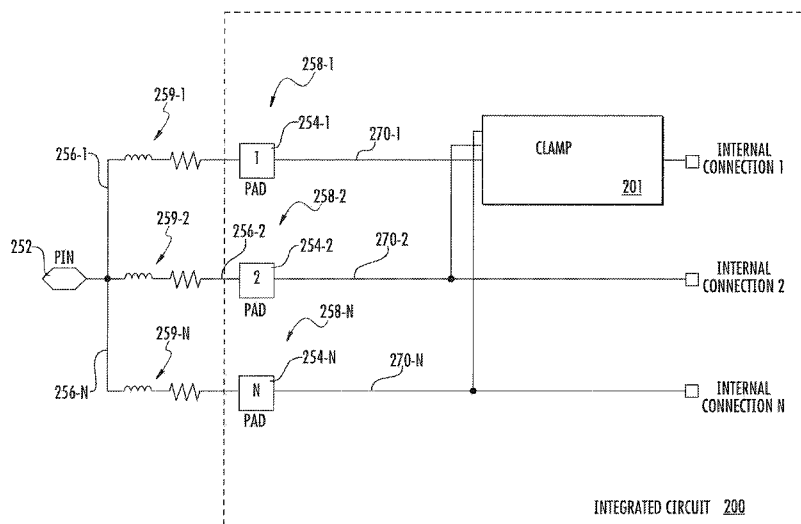


FIG. 2

(57) Abstract: A circuit comprises a plurality of segments and a clamp circuit. Each of the plurality of segments comprises a bond pad coupled to a multi-bonded pin via a respective bond wire and a conductor coupling the bond pad to a respective internal connection. The bond pad from each of the plurality of segments is coupled to the same multi-bonded pin. The clamp circuit comprises a plurality of input pins and a plurality of clamp transistors. Each input pin is coupled to the bond pad of a respective one of the plurality of segments via the respective conductor. Each clamp transistor is coupled to a respective one of the input pins, wherein each of the plurality of clamp transistors is configured to prevent a voltage on the respective conductor from exceeding a respective voltage limit.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/023281**A. CLASSIFICATION OF SUBJECT MATTER****G11C 5/14(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)

G11C 5/14; H01L 23/52; H02H 3/22; H01L 23/48; H01L 23/02; H02H 9/04; H02H 9/00

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:ESD,clamp*,protect*,pad,pin,bond*,memory,processor,multi

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6424028 B1 (DICKINSON; HARVEY F.) 23 July 2002 See Abstract, Column 4, lines 33-48, Column 6, line 31-Column 7, line 22, Column 8, lines 33-57 and Figures 1, 4.	1-20
A	US 05900643A A (PRESLAR; DONALD R. et al.) 04 May 1999 See Column 1, line 50-Column 2, line 57 and Figure 1.	1-20
A	US 05239440A A (MERRILL; RICHARD B.) 24 August 1993 See Column 2, line 62-Column 3, line 68 and Figure 1.	1-20
A	US 2006-0092589 A1 (DIPANKAR BHATTACHARYA et al.) 04 May 2006 See Abstract, Paragraphs 18-32 and Figures 2, 3.	1-20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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Date of the actual completion of the international search

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Information on patent family members

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