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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

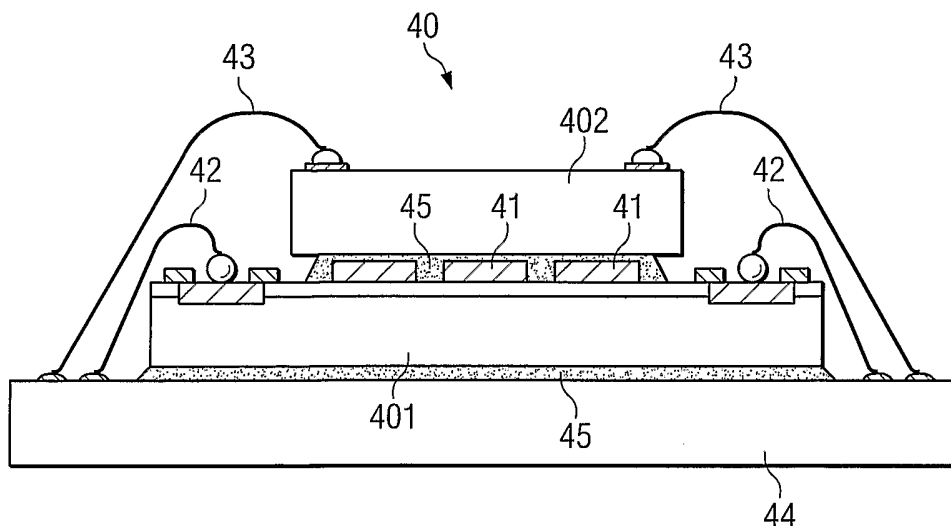
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VERTICALLY STACKED SEMICONDUCTOR DEVICE



(57) Abstract: A semiconductor device 40 including a vertical assembly of semiconductor chips 401, 402 interconnected on a substrate with one or more metal standoffs 41 providing a fixed space between each supporting chip 401 and a next successive vertically stacked chip 402 is described. The device is fabricated by patterning islands of aluminum atop the passivation layer of each supporting chip simultaneously with processing to form bond pad caps. The fabrication process requires no additional cost, and has the advantage of providing standoffs for a plurality of chips by processing in wafer form, thereby avoiding additional assembly costs. Further, the standoffs provide improved thermal dissipation for the device and a uniform, stable bonding surface for wire bonding each of the chips to the substrate.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(7) : H01L 23/02,21/48,23/48,23/34 21/44; H02G 3/08
 US CL : 257/686,723, 724,778,777,685;438/614,611
 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. : 257/686,723, 724,778,777,685;438/614,611

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,650,009 B2 (HER et al) 18 Nov 2003 (18.11.2003) the abstract,fig 3A,fig 3B,column 4 lines 26-34	1-8 ----- 9-11
X --- Y	US 2003/0127719 (CHANG) 10 Jul 2003 (10.07.2003) , the abstract,fig 4,the whole document	1-8 ----- 9-11
--- Y	US 6,531,784B1 (SHIM et al) 11 Mar 2003 (11.03.2003) the whole document	----- 1-11

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

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