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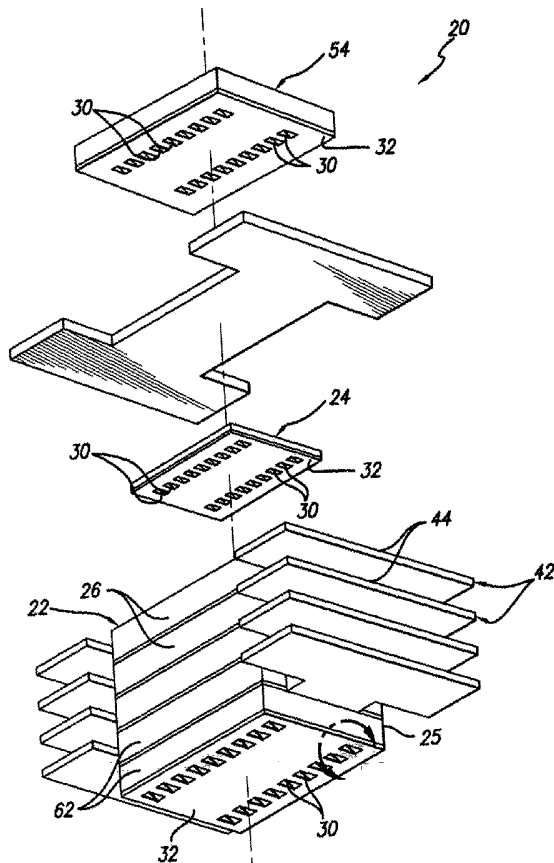
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- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ELDRIDGE, Benjamin, N. [US/US]; 651 Sheri Lane, Danville, CA 94526 (US).
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- (74) Agents: MERKADEAU, Stuart, L. et al.; FORMFACTOR, INC., 2140 Research Drive, Livermore, CA 94550 (US).
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- (71) Applicant (for all designated States except US): FORMFACTOR, INC. [US/US]; 2140 Research Drive, Livermore, CA 94550 (US).

[Continued on next page]

(54) Title: STACKED SEMICONDUCTOR DEVICE ASSEMBLY WITH MICROELECTRONIC SPRING CONTACTS



(57) Abstract: A three-dimensional, stacked semiconductor device assembly with microelectronic spring contacts, and components thereof, is disclosed. The assembly comprises a plurality of stacked modules, which are capable of being readily mounted to, and demounted from, one another. Each module of the assembly comprises a semiconductor device, comprising a die, mounted to a stacking substrate. The die and the stacking substrate are optionally capable of being readily mounted to, and demounted from one another. A bottommost module in the assembly is suitable for attaching directly to a substrate or other component, such as a printed circuit board, and a topmost component in the assembly preferably comprises a decoupling and/or termination substrate. Each semiconductor device in the assembly has terminals on a surface thereof, at least selected ones of which are provided with a contact element. Each device preferably comprises one or more stop structures for the microelectronic springs on its terminal surface. Contact elements on the semiconductor device and between adjacent modules preferably comprise microelectronic lithographic-type molded spring contacts.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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 H01L H05K

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, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 478 188 A (AMERICAN TELEPHONE & TELEGRAPH) 1 April 1992 (1992-04-01)	1, 11-16, 19-24, 27, 34-38, 41, 42
Y	column 2, line 29 -column 4, line 55; figures 1-5	2, 6, 8, 9, 18, 25, 28, 30, 31, 40
A		3-5, 7, 10, 17, 26, 29, 32, 33, 39
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Krause, J

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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