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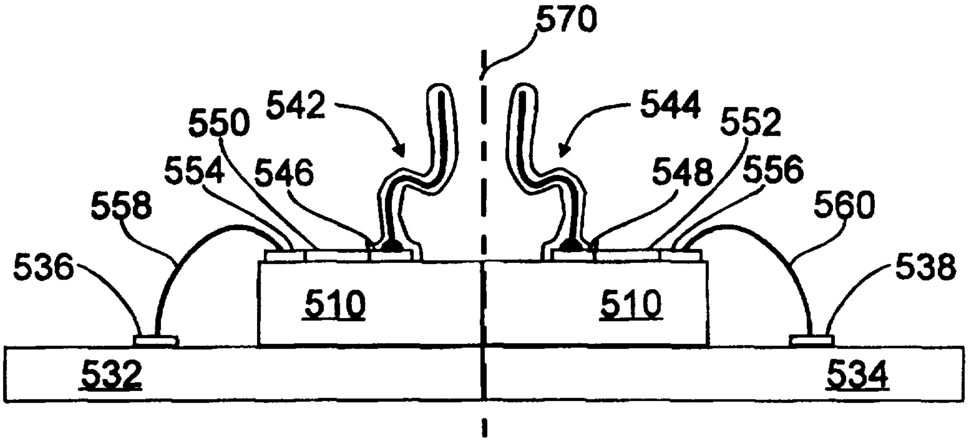

(57) Abstract

A plurality of free-standing spring elements (512) are mounted to a surface (510a) of a carrier substrate (510). The carrier substrate (510) is mounted to a surface (502a) of a semiconductor device (502). Bond pads (504) of the semiconductor device are connected to the spring elements (512) by bond wires (520) extending between the bond pads (504) and terminals (516) associated with the spring elements. Alternatively, the carrier is flip-chip reflow soldered to the semiconductor device. The carrier substrate (510) is suitably mounted to one or more semiconductor devices (532, 534) prior to the semiconductor devices being singulated from a semiconductor wafer upon which they are formed. Resilience and compliance to effect pressure connections to the semiconductor device (502) are provided by the spring elements (512) extending from the carrier substrate (510), per se. Hence, the carrier substrate (510) suitably remains rigid with respect to the semiconductor device (502). The carrier substrate (510) is advantageously pre-fabricated, by mounting the spring elements (512) thereto prior to mounting the carrier substrate to the semiconductor device(s).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US96/08328

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :Please See Extra Sheet.
US CL :Please See Extra Sheet.
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. : Please See Extra Sheet.

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 5,414,298 A (GRUBE et al.) 09 MAY 1995, see entire document.	1,3-5,9,19,20,21,22,23,24,32,34-37,41 and 44 -------------- 8 and 33
X	US 3,842,189 A (SOUTHGATE) 15 OCTOBER 1974, see entire document.	34-37
X	US 5,346,861 A (KHANDROS et al.) 13 SEPTEMBER 1994, see entire document.	38 and 40
X	US 5,230,632 A (BAUMBERGER et al.) 27 JULY 1993, see entire document.	38-40

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

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US CL :

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