Title (en)

FLIP CHIP DEVICES WITH FLEXIBLE CONDUCTIVE ADHESIVE

Title (de)

FLIP-CHIP-ANORDNUNGEN MIT FLEXIBLEN LEITFAHIGEN KLEBSTOFF

Title (fr)

DISPOSITIFS A PUCES A PROTUBERANCES COMPRENANT UNE COLLE CONDUCTRICE SOUPLE

Publication

EP 1090535 A1 20010411 (EN)

Application

EP 99921432 A 19990422

Priority

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- US 8332698 P 19980428
- US 9214798 P 19980709
- US 16663398 A 19981005
- US 27625999 A 19990325

Abstract (en)

[origin: WO9956509A1] An electronic device (10, 100) includes one or more semiconductor chips (30, 130) interconnected to a next level substrate (20, 120) in a flip chip manner using flexible conductive adhesive (40, 140) having a low modulus of elasticity. The flexible conductive adhesive (40, 140) is applied as conductive bumps (40, 140) on the contact pads (24, 124) of the substrate (20, 120) or on the contact pads (34, 134) of the semiconductor chips (30, 130) and is a flexible thermoplastic or thermosetting resin filled with electrically-conductive particles. Other electronic devices (44, 46, 144, 146), such as packaged components including resistors, capacitors and the like, are bonded with the same flexible conductive adhesive bump (24, 124, 34, 134) approach as is employed for the semiconductor chips (30, 130). The contact pads of both the chip (30, 130) and the next level substrate (20, 120) are preferably passivated with a metallic coating (38), preferably a precious metal, prior to interconnection to inhibit oxidation of the pads (37). A flexible insulating organic underfill (150) may be used, preferably one having substantially the same low modulus of elasticity as that of the flexible conductive adhesive (40, 140).

IPC 1-7

H05K 1/18

IPC 8 full level

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CPC (source: EP KR)

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