

Title (en)
METHOD AND DEVICE FOR CONTACTING SEMICONDUCTOR CHIPS

Title (de)
VERFAHREN UND VORRICHTUNG ZUM KONTAKTIEREN VON HALBLEITERCHIPS AUF EINEM METALLISCHEN SUBSTRAT

Title (fr)
PROCEDE ET DISPOSITIF DE CONNEXION DE PUCES DE SEMI-CONDUCTEUR

Publication
EP 1661157 A2 20060531 (DE)

Application
EP 04762724 A 20040828

Priority
• DE 2004001900 W 20040828
• DE 10341186 A 20030906

Abstract (en)
[origin: WO2005027200A2] The invention relates to a method and device that make it possible to increase the productivity of the chip bonding and the before and after working steps associated with the chip bonding. To this end, the invention provides a method for contacting semiconductor chips (3) on a metallic substrate (16), whereby an etch resist (27) is located at least on one substrate side, and semiconductor chips (3) are contacted on the contacting side (30) by means of flip-chip bonding processes, during which a contacting region (7) is created on the contacting side (30) of the substrate (16). A semiconductor chip (3) having two contact bumps (6) is contacted on said contacting region in such a manner that: a contact bump (6) is contacted on both sides of a structure line (35) or of a structure trench (13) dividing the contacting region (7), and; after the contacting, an underfilling of the chip (3) ensues after which an electrically insulating passage (14) is made in the contacting region (7), and a module (32), which supports the semiconductor chip (3), is removed from the substrate (16).

IPC 1-7
H01L 21/00

IPC 8 full level
H01L 21/00 (2006.01); **G06K 19/077** (2006.01); **H01L 21/48** (2006.01); **H01L 21/56** (2006.01); **H01L 21/60** (2006.01); **H01L 21/68** (2006.01); **H01L 23/498** (2006.01); **H05K 3/20** (2006.01); **H05K 3/30** (2006.01); **H05K 13/00** (2006.01)

CPC (source: EP US)
H01L 21/563 (2013.01 - EP US); **H01L 21/67144** (2013.01 - EP US); **H01L 21/6835** (2013.01 - EP US); **H01L 23/49855** (2013.01 - EP US); **H01L 24/28** (2013.01 - EP US); **H01L 24/32** (2013.01 - EP US); **H01L 24/81** (2013.01 - EP US); **H01L 24/97** (2013.01 - EP US); **H01L 2221/68318** (2013.01 - EP US); **H01L 2221/68354** (2013.01 - EP US); **H01L 2224/16** (2013.01 - EP US); **H01L 2224/27013** (2013.01 - EP US); **H01L 2224/73203** (2013.01 - EP US); **H01L 2224/81801** (2013.01 - EP US); **H01L 2224/83051** (2013.01 - EP US); **H01L 2224/83102** (2013.01 - EP US); **H01L 2224/83385** (2013.01 - EP US); **H01L 2224/83951** (2013.01 - EP US); **H01L 2224/92125** (2013.01 - EP US); **H01L 2224/97** (2013.01 - EP US); **H01L 2924/01005** (2013.01 - EP US); **H01L 2924/01006** (2013.01 - EP US); **H01L 2924/01013** (2013.01 - EP US); **H01L 2924/0102** (2013.01 - EP US); **H01L 2924/01029** (2013.01 - EP US); **H01L 2924/01047** (2013.01 - EP US); **H01L 2924/0105** (2013.01 - EP US); **H01L 2924/01051** (2013.01 - EP US); **H01L 2924/01057** (2013.01 - EP US); **H01L 2924/01061** (2013.01 - EP US); **H01L 2924/01079** (2013.01 - EP US); **H01L 2924/01082** (2013.01 - EP US); **H01L 2924/014** (2013.01 - EP US); **H01L 2924/12042** (2013.01 - EP US); **H01L 2924/15151** (2013.01 - EP US); **H01L 2924/18161** (2013.01 - EP US); **Y10T 156/1702** (2015.01 - EP US)

Citation (search report)
See references of WO 2005027200A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005027200 A2 20050324; **WO 2005027200 A3 20060316**; **WO 2005027200 A8 20060601**; AU 2004273128 A1 20050324; CA 2539463 A1 20050324; DE 10341186 A1 20050331; EP 1661157 A2 20060531; US 2007163992 A1 20070719; US 7727861 B2 20100601

DOCDB simple family (application)
DE 2004001900 W 20040828; AU 2004273128 A 20040828; CA 2539463 A 20040828; DE 10341186 A 20030906; EP 04762724 A 20040828; US 57025604 A 20040828