



(51) International Patent Classification:
H01L 23/12 (2006.01) *H01L 23/48* (2006.01)

(21) International Application Number:
PCT/US2010/059237

(22) International Filing Date:
7 December 2010 (07.12.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/655,335 29 December 2009 (29.12.2009) US

(71) Applicant (for all designated States except US): **INTEL CORPORATION** [US/US]; 2200 Mission College Boulevard, Santa Clara, California 95052 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GUZEK, John, Stephen** [US/US]; 805 W. Beechnut Dr., Chandler, Arizona 85248 (US). **GONZALEZ, Javier, Soto** [CR/US]; 2612 E. La Costa Dr., Chandler, Arizona 85249 (US). **WATTS, Nicholas, R.** [US/US]; 805 E. Brookwood Court, Phoenix, Arizona 85048 (US). **NALLA, Ravi, K.** [IN/US]; 1611 W. Kingbird Drive, Chandler, Arizona 85286 (US).

(74) Agents: **VINCENT, Lester, J.** et al.; Blakely Sokoloff Taylor & Zafman, 1279 Oakmead Parkway, Sunnyvale, CA 94085 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
13 October 2011

(54) Title: SEMICONDUCTOR PACKAGE WITH EMBEDDED DIE AND ITS METHODS OF FABRICATION

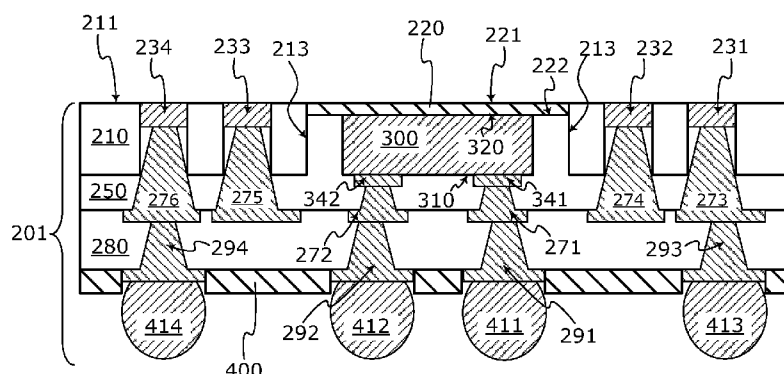


FIGURE 1

(57) Abstract: Embodiments of the present invention describe a semiconductor package having an embedded die. The semiconductor package comprises a coreless substrate that contains the embedded die. The semiconductor package provides die stacking or package stacking capabilities. Furthermore, embodiments of the present invention describe a method of fabricating the semiconductor package that minimizes assembly costs.

