



(51) International Patent Classification:

H01L 25/04 (2006.01) *B81C 1/00* (2006.01)
H01L 25/16 (2006.01)

(21) International Application Number:

PCT/FI2012/050693

(22) International Filing Date:

29 June 2012 (29.06.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20115682 30 June 2011 (30.06.2011) FI
20125595 31 May 2012 (31.05.2012) FI

(71) Applicant (for all designated States except US):
MURATA ELECTRONICS OY [FI/FI]; Myllykivenkuja
6, FI-01621 Vantaa (FI).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KUISMA, Heikki**
[FI/FI]; Hanuripolku 5 A 5, FI-00420 Helsinki (FI).

(74) Agent: **BORENIUS & Co Oy Ab**; Itämerenkatu 5, FI-
00180 Helsinki (FI).

(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, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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).

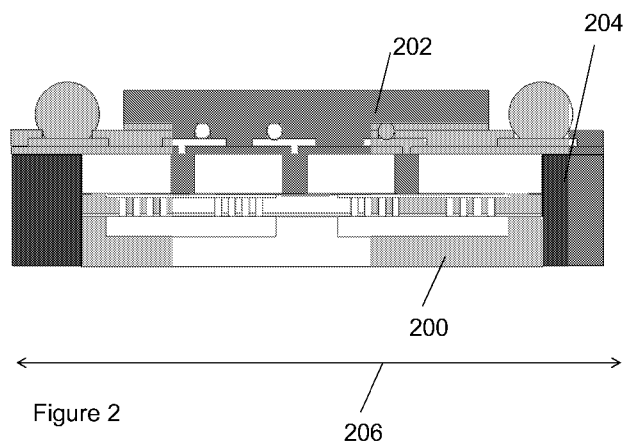
Declarations under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))

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))

(54) Title: A METHOD OF MAKING A SYSTEM-IN-PACKAGE DEVICE, AND A SYSTEM-IN-PACKAGE DEVICE



(57) Abstract: A method of making a system-in-package device, and a system-in-package device is disclosed. In the method, at least one first species die with predetermined dimensions, at least one second species die with predetermined dimensions, and at least one further component of the system-in-device is included in the system-in package device. At least one of the first and second species dies is selected for redimensioning, and material is added to at least one side of the selected die such that the added material and the selected die form a redimensioned die structure. A connecting layer is formed on the redimensioned die structure. The redimensioned die structure is dimensioned to allow mounting of the non-selected die and the at least one further component into contact with the redimensioned die structure via the connecting layer.

