## (12) CORRECTED EUROPEAN PATENT APPLICATION

(15) Correction information:

Corrected version no 1 (W1 A2)

Corrections, see

Bibliography INID code(s) 72

(48) Corrigendum issued on:

12.02.2014 Bulletin 2014/07

(43) Date of publication:

16.10.2013 Bulletin 2013/42

(21) Application number: 13162936.2

(22) Date of filing: 09.04.2013

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

**Designated Extension States:** 

**BA ME** 

(30) Priority: 09.04.2012 JP 2012088347

(71) Applicant: Yokogawa Electric Corporation Tokyo 180-8750 (JP)

(51) Int Cl.:

H01L 23/498 (2006.01)

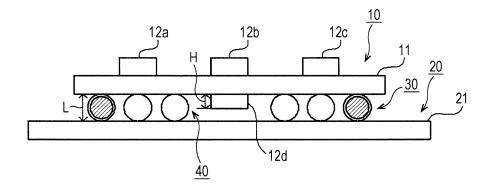
- (72) Inventor: Hiwatashi, Masaya Musashino-shi, Tokyo 180-8750 (JP)
- (74) Representative: Zimmermann, Tankred Klaus et al Schoppe, Zimmermann, Stöckeler Zinkler & Partner P.O. Box 246 82043 Pullach (DE)

## (54) Substrate device

(57) A substrate device, includes: a plurality of substrates stacked one on another including a substrate (10) on which electronic components (12a to 12d) are mounted; and a coupling member (30 and 40) connecting mechanically and electrically the two opposed substrates (10 and 20), wherein the coupling member includes: a

plurality of core-less solder balls (40) connecting mechanically and electrically the two opposed substrates (10 and 20); and a plurality of spacers (30) configured to keep a clearance between the two opposed substrates (10 and 20) wider than a mounting height of the electronic component (12d) between the substrates.

## FIG. 1A



=P 2 650 916 A8