

2 A 1

2 B 2 A A - A

3 2 A 2 B

4 2

5 1

6 1

1 : 2a, 2b, 2c, 2d :

3 : 4 :

6 : 7a, 7b :

8 : 9 :

10 : 11 :

12 : 13 :

14 :

CSP(chip size package)

BGA(ball grid array)

가

CSP BGA

가

2000 - 68405

1

2000 - 68405

(21) () (21) () (21)

21) () (22) (22) () () (22)

(21) () (21)

(20; solder ball) (21)

(20) 가 가

(21) 가 (21) (21) (22)

1 (20) 가

(shearing stress) 가 가 가

가

1 1 1 1

2 1 4 1 1

1 2 1 2

1

가

2 B 2 A A-A 2 A 1

2 A 2 B , 1 ()
 (1) (6) (1) 2 A
 (6)가 (1)

4 (2a 2d) (6)가 (1) (5)
 longitudinal slit) 2 A (7a; transversal slit) (2a 2d) (1) (7b; long
 (7a) (1)
 (7b) (7b) (1) (6) (

(8) (2a 2d) (9)
 (6) (3) (4) (8) 2 B
 (7a 7b) (10) (10) 2 A

(2a 2d) (5)
 (4) (8) (9) (gold wire)
 (1) (2) (7a 7b)
 , 4 (2)

3 2 A 2 B 1
 가 (11) (2a 2d)
 (3) (11) (3) (reflow)
 (11)

가 (2a 2d)
 (11) 3
 (11) 3
 ,가 가 가

A 2 B 2 4 2 2
 1 4 2
 (7b) (1) (7a) (16)
 (6) (16)
 1 가 (8) (6 16)

1 2 가 4 (2a 2b)
 6 8
 가

1
 6 1
 5 1
 (7a 7b) (press punching) (12)
 (13) (S1) (13) (7a 7b)
 가
 (13) (13) (S2) ; die - mounter)
 (12) (8) (9) (stage) (S3) .
 (6)
 (7a 7b) (12) 가 (7a 7b) (10) (S4) .
 (4) () .
 (14) (; wheel cutter) (13)
 (12)

가
 (13) (12)

2
 (57)

1.
 1 1 ;
 1 , 2 , 1 1 1 1
 ;
 2.
 1 ,

3.

1 ,

2

4.

2 ,

2

5.

1 ,

, .

6.

2 ,

, .

7.

3 ,

, .

8.

4 .

, .

9.

1 2

;

1

, ;

10.

9

,

,

;

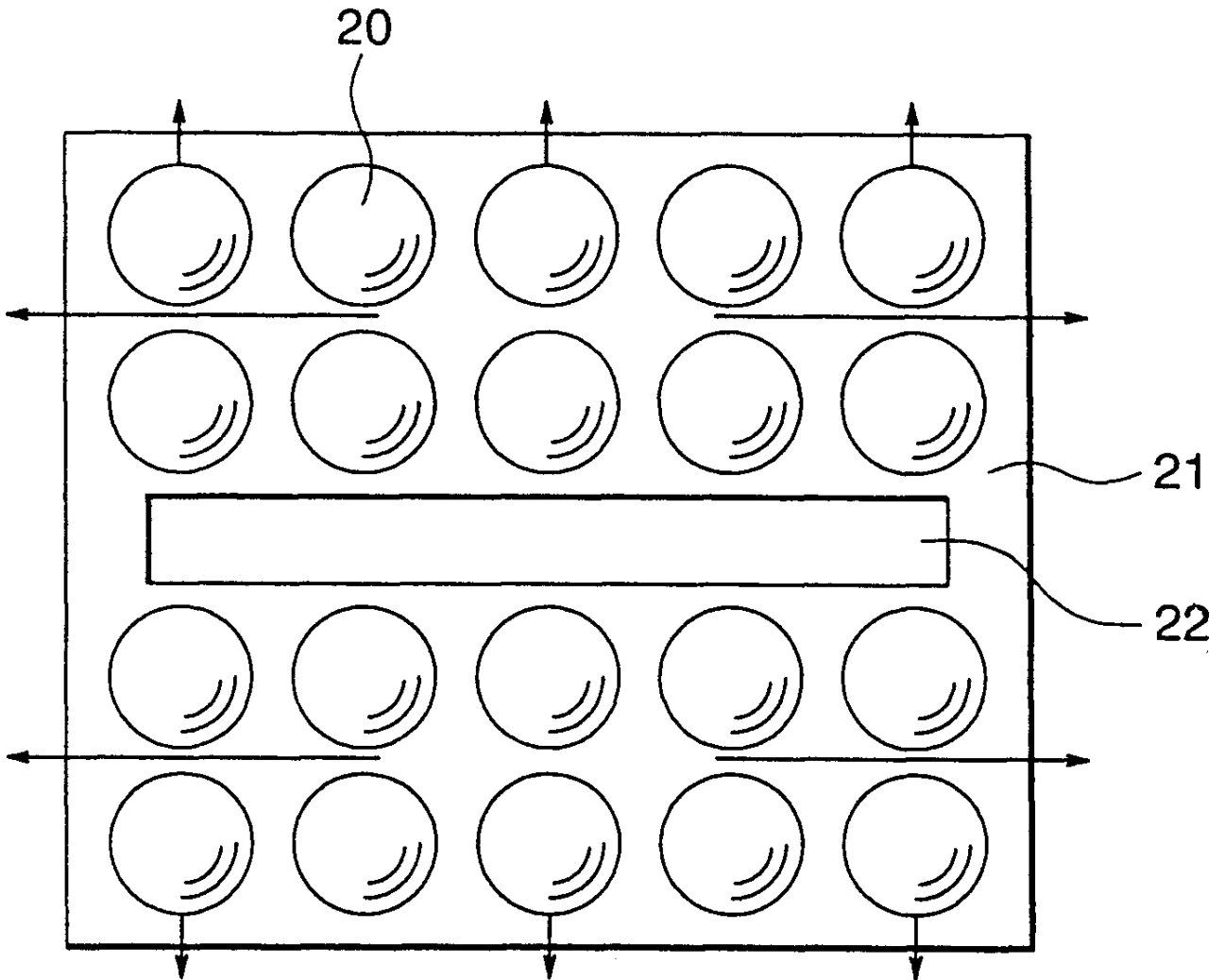
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1

2

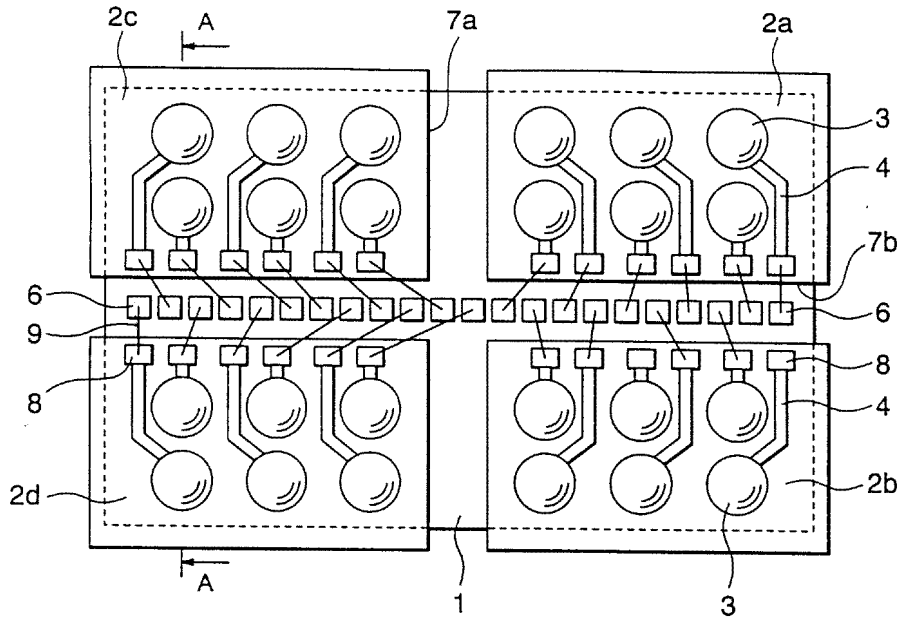
1

종래 기술

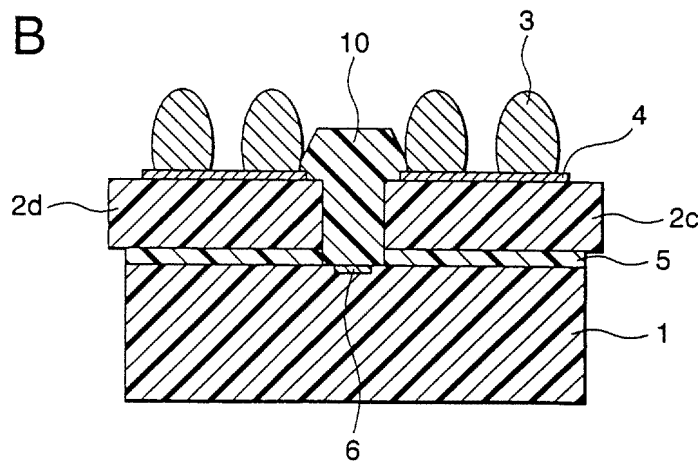


2

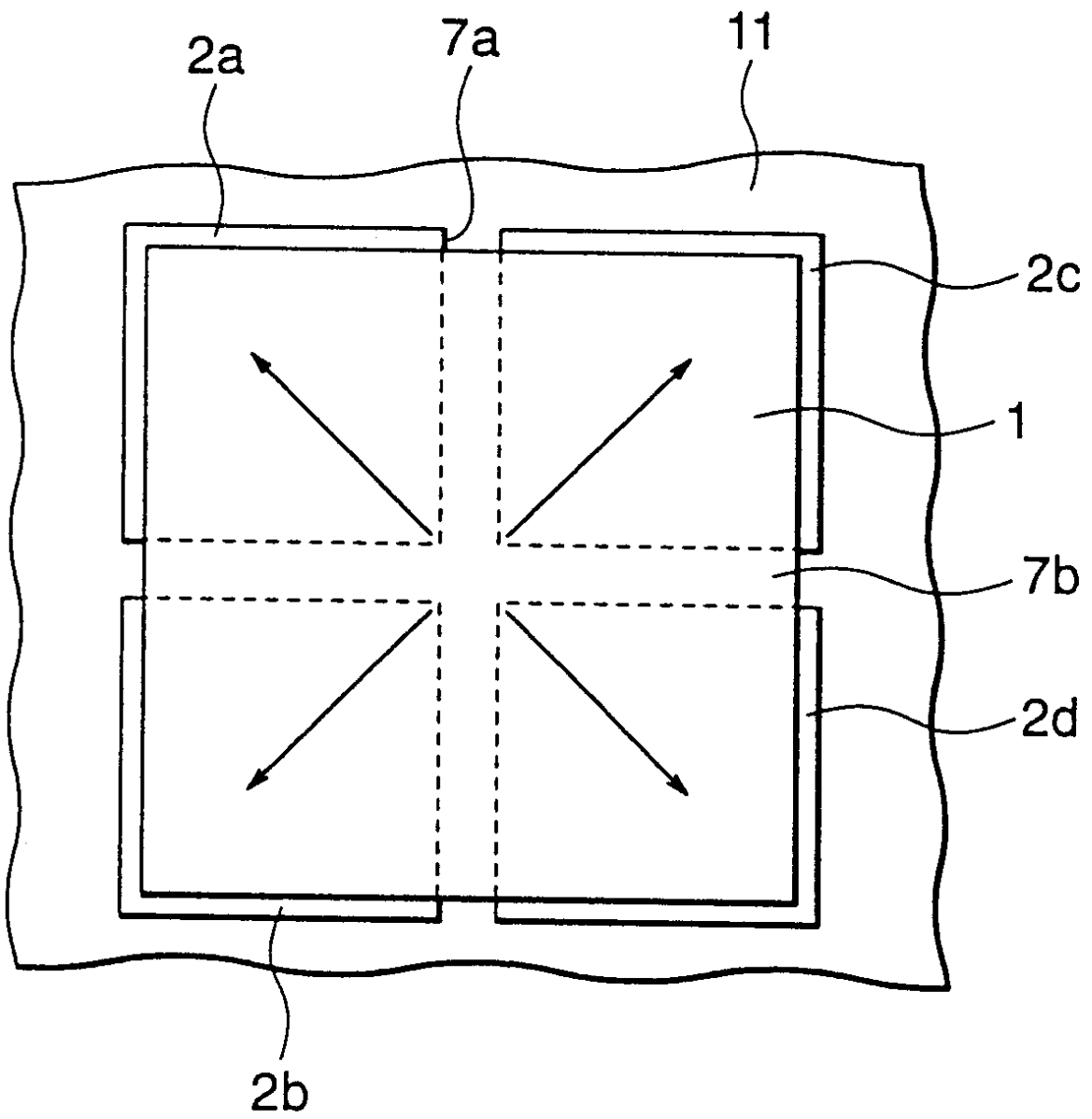
A



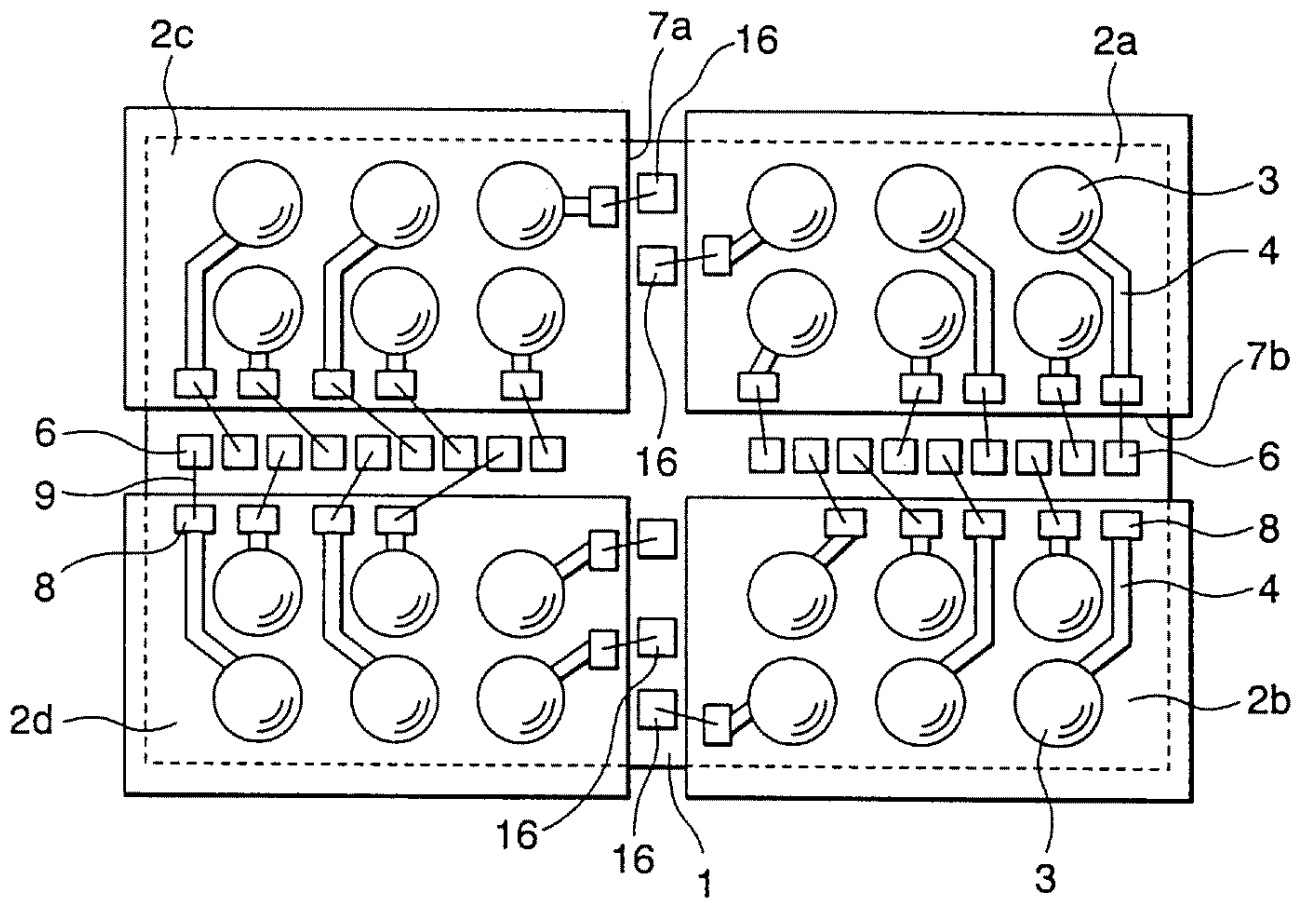
B



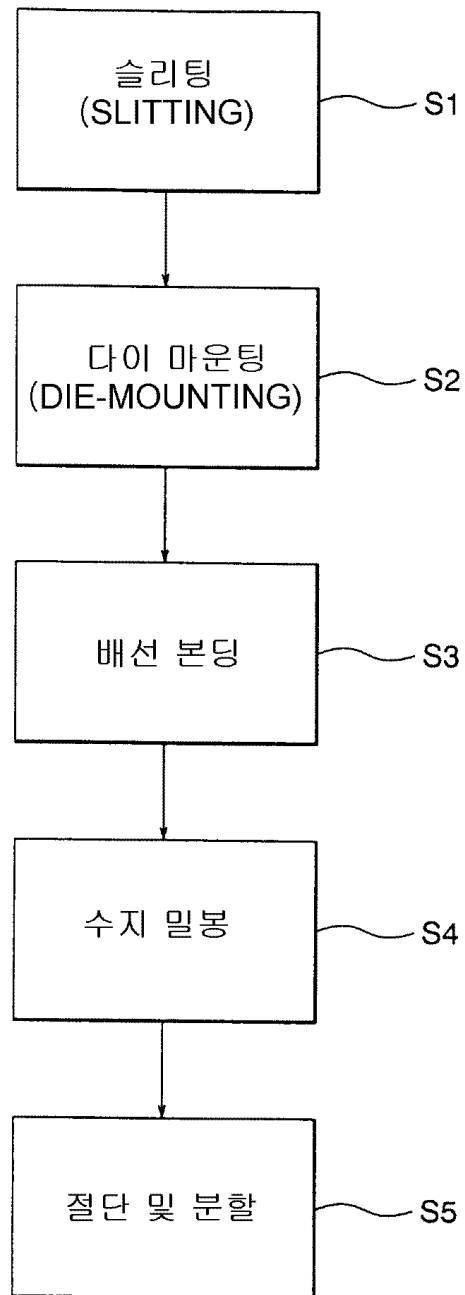
3



4



5



6

