

(19)  
(12)(KR)  
(B1)(51) 。 Int. Cl.<sup>6</sup>  
H01L 21/60(45)  
(11)  
(24)2004 08 25  
10-0435978  
2004 06 03(21) 10-1997-0018462  
(22) 1997 05 13(65)  
(43)10-1997-0077398  
1997 12 12

(30) 96-118899 1996 05 14 (JP)

(73) 가 가  
5-20-1가 가  
가 4-6

(72) 가 1658-1

가 4-46-14

271-3

가  
2-17-7

(74)

:

(54)

, 가 , ,  
,, , 가  
· ,  
가 .

1 1 ,  
2 1 A-A ,  
3 ,  
4 ,  
5 2 ,  
6 ,  
7 ,  
8 3 ,  
9 4 ,  
10a 4 A-A ,  
10b 4 B-B ,  
11 MC가 ,  
12 MC ,  
13 14 12 A-A , B-B ,  
15 5 ,  
16 15 ,  
17 15 ,  
18 ,  
19 ,  
20 18, 19 A-A ,  
21 (ATA ) .

TSOP(Thin Small Out-line Package) 가  
DRAM(Dynamic Random Access Memory)  
TSOP  
가 ( )  
가 , T  
SOP 2  
2 TSOP ( )  
, TSOP BP (1990 6 ,  
34 45 )  
TSOP 2 가

[1] TSOP

가

( )  
(spacing)

가

[2] TSOP

가

가

가

가

가

가

가

가

가

가

[ ]

1

1

1

3

1

A - A

1

(10)

(1)

(1)

(5)

, Ag

(10)

TSOP

(4)

(4)

TSOP

(1)

DRAM

(1) ( ) ( )BP가  
BP ,

(1) (2A)가 (1) BP (6)

(2B)가 (1) (2B) (1) BP

(1), (2A), (2B), (4), (5) (6)  
(7) (7) , 가 가

(7) (7A) (7B) (3A)가 (3B)가 (7)  
(7A) (3A), (3B) (3A) (1) (2A)  
(3B) (1) (3B) (1) (10) (7) (7A) (7)  
(3B) (1) BP (1) (3A) BP (7A) (7)  
(7B) 2 (5) (5) (2A), (2B), (4),  
(3A), (3B), (6) (3A), (3B), (7) (5) Cu Fe-  
(5) (3A), (3B) 42 50[%]) (3B)  
(3A) ,  
(10) 1 ( )MC 11  
PC ( )

PC (16), (17), (18) MC (19)

MC (20) (19) , PC MC  
가 12, 13 14 ,  
MC (15) (14) (11) (15)  
(11) 3 4 (10) (10) (11) ( )  
MC ( ) 3( ) (10) (10) (11) ( )  
7) (22)가 (7) (7A) ( ) PC Y (10)  
(10) 4( 3 (7) (7A) (3A) (10) (10) (7) (7  
B) (10) (3B)가 (10) (10) (3A) (1) (3A)  
1) BP (10) BP (3A) (10) (10)  
BP 가 (3B) (7) (7A) (10) (10)  
(10) (10) (3A), (3B) (11)  
( ) (foot print))(13) ( ) (12) (13)

10a 10b ,

가 , (12) (7)  
 , (7) (7A) , ( Y ) (10) (7) (7A) (3A)  
 (10) (7) (7A) (3A) (10) (7) (3A)  
 (7) (7B) (3B)가 , BP (10) (7) (3A)  
 7B) (10) (3A) (10) (3A)(CS) (3A)  
 (가 ) (12A)가 , (11)  
 (12) (7) (7B) (10)  
 (3A) (12) 가 .  
 [1] (11) (10) , (7) BP (7)  
 (1) , (7) (7A) (1) (7B)  
 (3A) (1) BP (3B)  
 , (10) (11) (7)  
 (7A) (10) , (10) (10) (7)  
 (10) (7) (7A) (3A) (10) (3A)  
 (7B) (3B)가 , (10) (3B) (1)  
 (1) BP , (10) BP (3A) (10)  
 3A) 가 , (10) (10) (10)  
 (3B) (7) (7A) (10) (3A)  
 (10) (10) (3B) (10) (3A)  
 11) (10) (10) 가 .  
 , (10) (11) (7) (7A) (10) (7)  
 , (7A) (3A) (10) (7) (7A) (10) (7)  
 (3A) (10) (7) (7B) (3B)가 , BP  
 (3A) (10) (7) (7A) (10) Y  
 (12) (3A) , (7) (7A) (10)  
 , (11) (10) (12) 가 .  
 , (7) (7A) (3A) (7) (7B) (3B)  
 (11) (10) , (10)  
 [2] ( ) , (7) (1) BP (1) (3A)  
 (7) (7A) (1) (7B)  
 BP , (7) (7A) (3B) (1()) (1)  
 1) (7) (7A) (10) (3A) (10)  
 , (3B) (10) (11) (12) (7) (7A) (12)  
 , (10) (3A)  
 2  
 5 2  
 5 (10) 4 (5) (10) TSOP (1) TSOP  
 (1) (2A) (1) (2A)가 BP (6)

(2B)가 (1) (2B) (1) BP

(1) 2 (2C) (1) 2 (2C)가

(1), BP (6) (2C), (4), (5) (6)

(7) (7A) (7B) (3A)가 (7)

(7) (7A) 2 (7C) (3B)가 (3C)가

(3A), (3B), (3C) (3A) (1) (2A)

(3B) (1) (3C) (1) 2 (10) (3A)

(2B) (7) (7A) (7) (7A) (7B) BP (7) (7A) (1) 2 (3C)

) BP (7C) (1) BP (7) (7A) (3C)

3 (10) 1 ( )

( ) 6( )

A) ( X ) (10) (10) (10) 7( 6 (7) (7C) (7C)가

(3C) (10) (10) (7) (7C) (10) (7A)

(10) (7) (7A) (10) (10) (10) (7) (7A)

(7) (7A) (10) ( X 가 ) (10) (7) (7C) (10) (3C) 가

(10) (7) (7C) X ( ) (3C)

7) (7A) (10) , X (10) 가 , Y , X (10) (3A)

(10) (12) (3C)

3

8 8

3 (10) (7) (7A) (7) (7A) (1) BP (7)

(3A) BP (7B) (3B) (7) BP (7A) (1) (7)

BP (7A) (7B) (3A) 2 (10) (7) (7A) 1 가 (1) BP (10) (3)

(10) A) 가 (10) (3A) 가 (10) 1

가 , (10) 가 .

4

9 4

9 (7) (7A) (7) (1) BP (1)

, (7) (3A) (7A) , (7) (7A) (3B) , (7)

(1) BP (7B) (3B) (7) (7A) (1) (7)

BP (7A) (7B) (3A) (7B) (3B) , (1) (7) BP (7A) (1)

(3A) (7B) (1) (7) BP (7A) (7C) 3

(10) (7) (7A) 2 가 , 2 (1) 가 , BP (10) (10) 가 (1 (3C)

0) 가 . , 가 , 2 가 , (10) 가

5

15 5 1 ( 가 ) TSOP , (7) 17

(100) (EEPROM) (23) MA, MA (23)

WD CD SA, CC가 VC, CC BP VC, (23) 1

BP 15

16 Vcc, Vss, I/O (2A) (6) BP 16 , NC

(3B) (100) 18 19 (11) (11) (11)

18 20 18 19 A-A QFP GA, QFP

(11) MPU DRAM C TSOP R DM GE (11)

(11) 21 ATA(AT Attachment) (24) , ATA

(24) 21 ATA (24) AT 가 , PCMCIA(Personal Computer Memory Card International Association)

(25) ATA (21) (21) PC(Personal Computer)

PDA(Personal Digital Assistant) PCMCIA ,

가 ,

(26) MPU , DRAM GA (100) GA PC

MCIA PCIN , (100) PCMCIA (27)

MPU , DRAM (100) (100) DRAM

CE(Chip Enable) (28) , MPU (100)

, ECC(Error Check Correction) ( )

, (ware leveling)( )

가 가

LOC(Lead On Chip) COL(Chip On Lead)

, SRAM(Static Random Access Memory), EPROM(Electrically Programmable Read Only Memory), EEPROM(Electrically Erasable Programmable ROM), ( EEPROM)

(57)

1.

1 2 , 1 가  
1 , 가  
1 , 2 2  
1 , 1 2  
1 , 2  
1 , 1 2  
2 , 1 2

2.

1 , 1 2 2 2

3.

1 , 1 2

4.

1 ,

5.

1 2 , 1 가  
1 , 가  
1 , 2 2 2  
1 , 1 2  
1 , 2  
1 2 가 2  
1 2  
1 2

6.

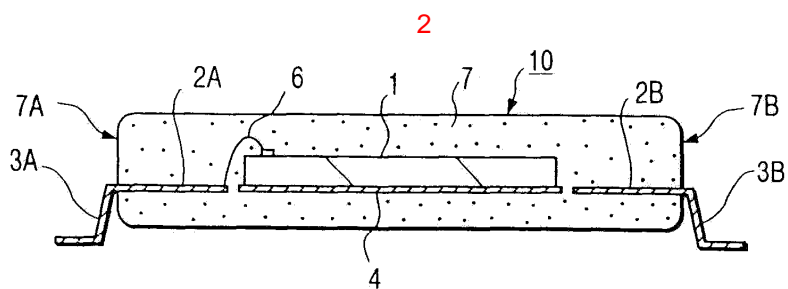
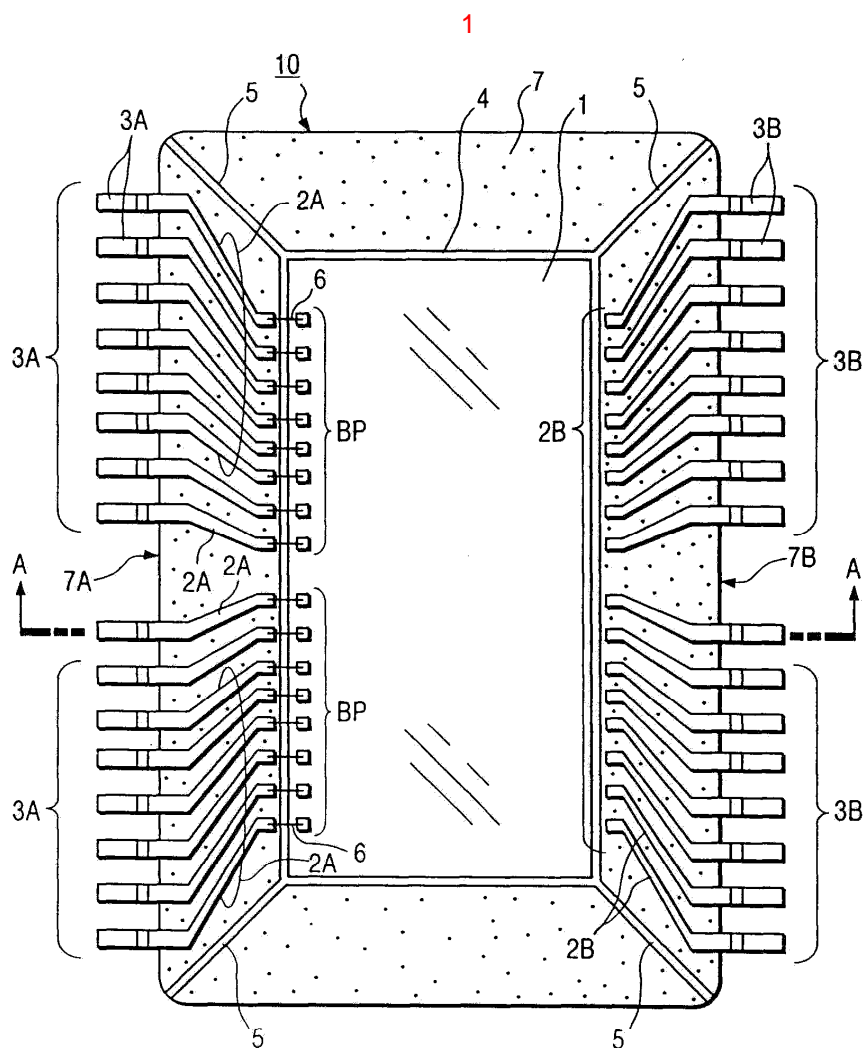
5 , 1 1 ,

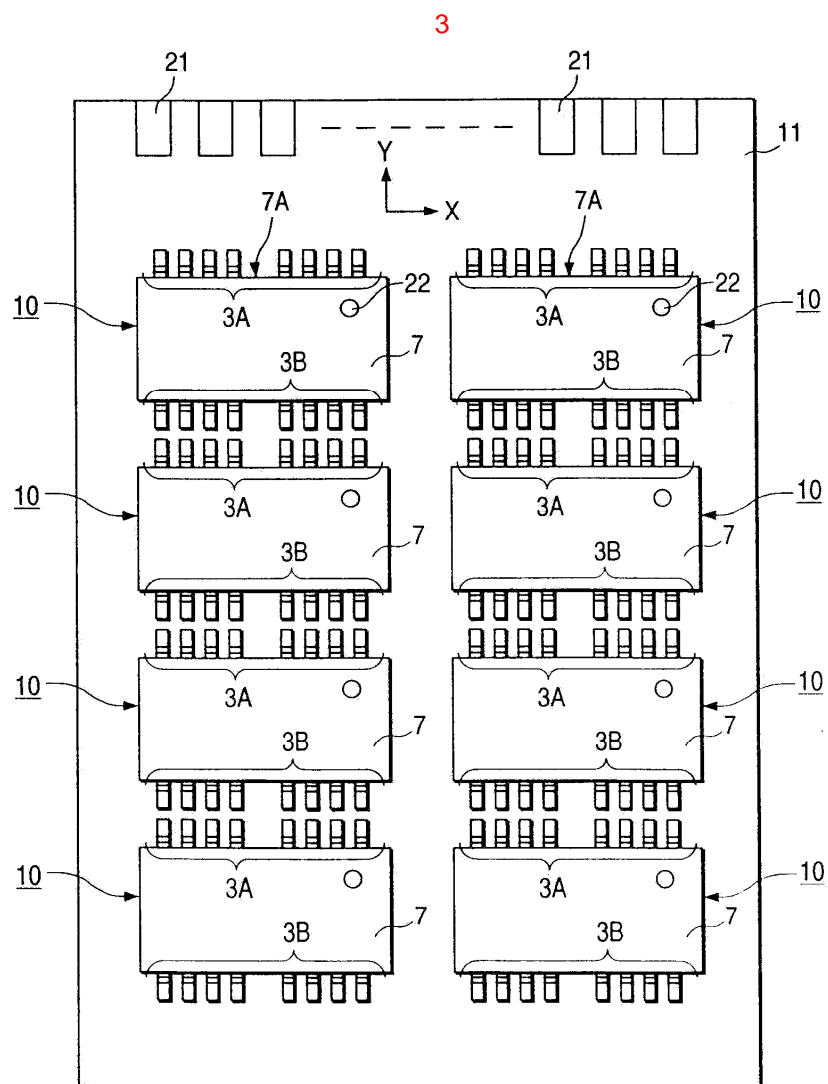


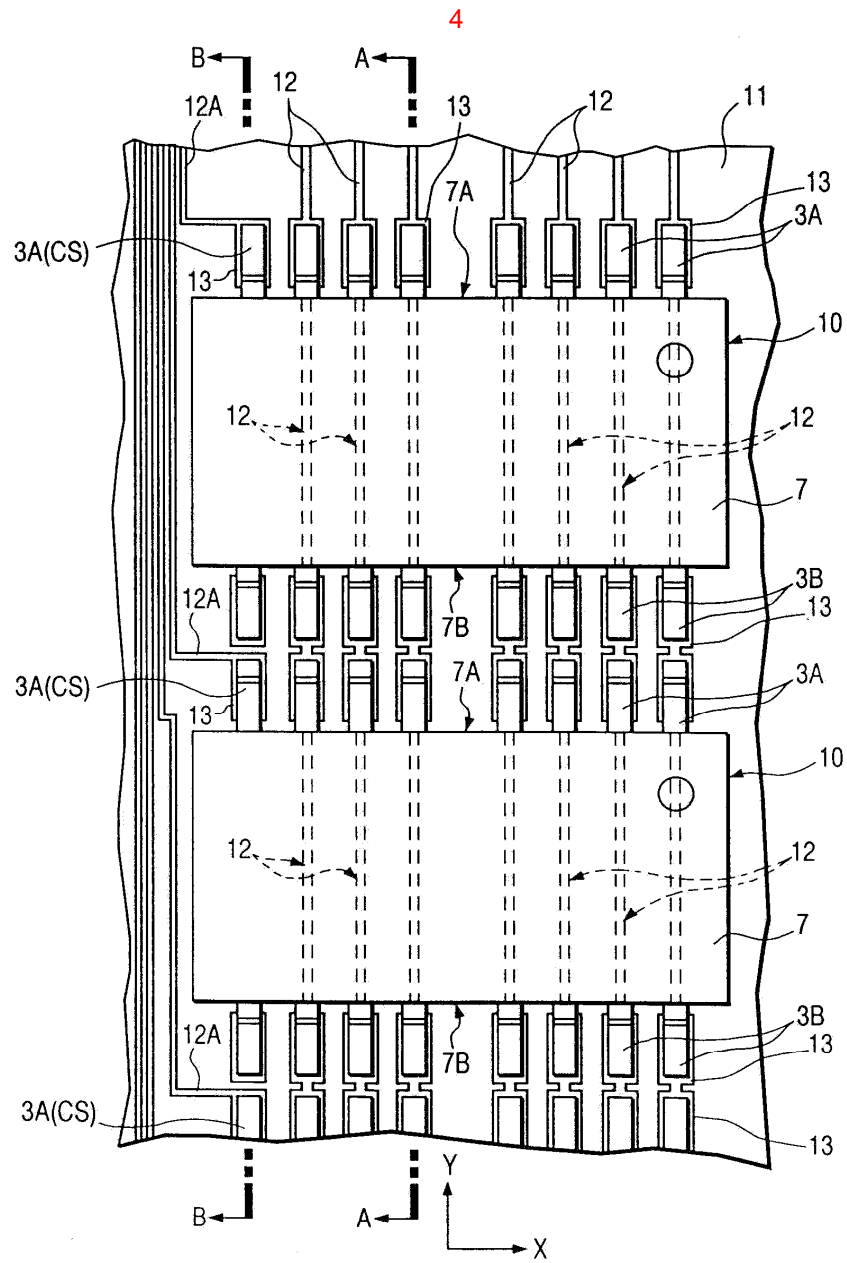
- 2 2 , 1 2  
 7.  
 5 , 1 1 , 2  
 2 2 , 1 2  
 8.  
 , ,  
 ,  
 , 1 1 2  
 , 가  
 , 가 1 ,  
 , 1 , 2 1  
 , 1 2 , 1  
 , 2  
 1 , 2  
 1 2 ,  
 9.  
 8 , 1  
 2  
 10.  
 8 , 1  
 2  
 11.  
 8 ,  
 12.  
 11 ,  
 13.  
 12 ,  
 14.  
 8 , 2 1  
 15.  
 14 , 1 2  
 16.  
 8 , 1 2  
 17.  
 8 ,  
 18.  
 8 , 8 가

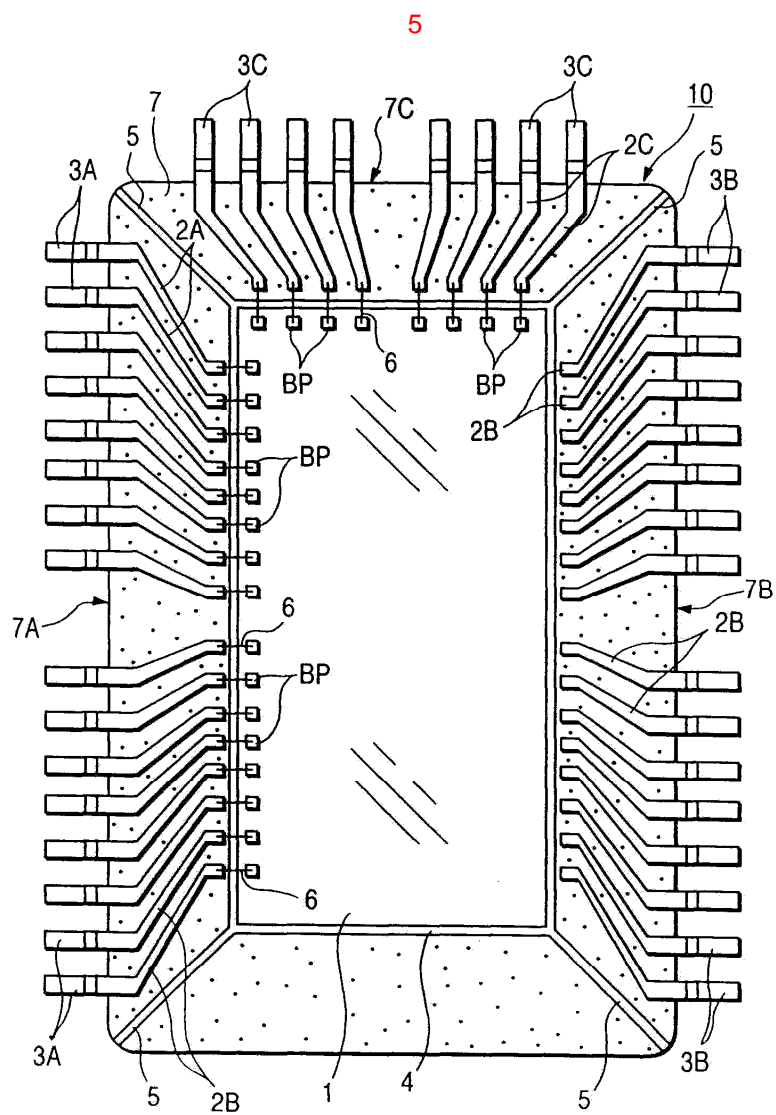


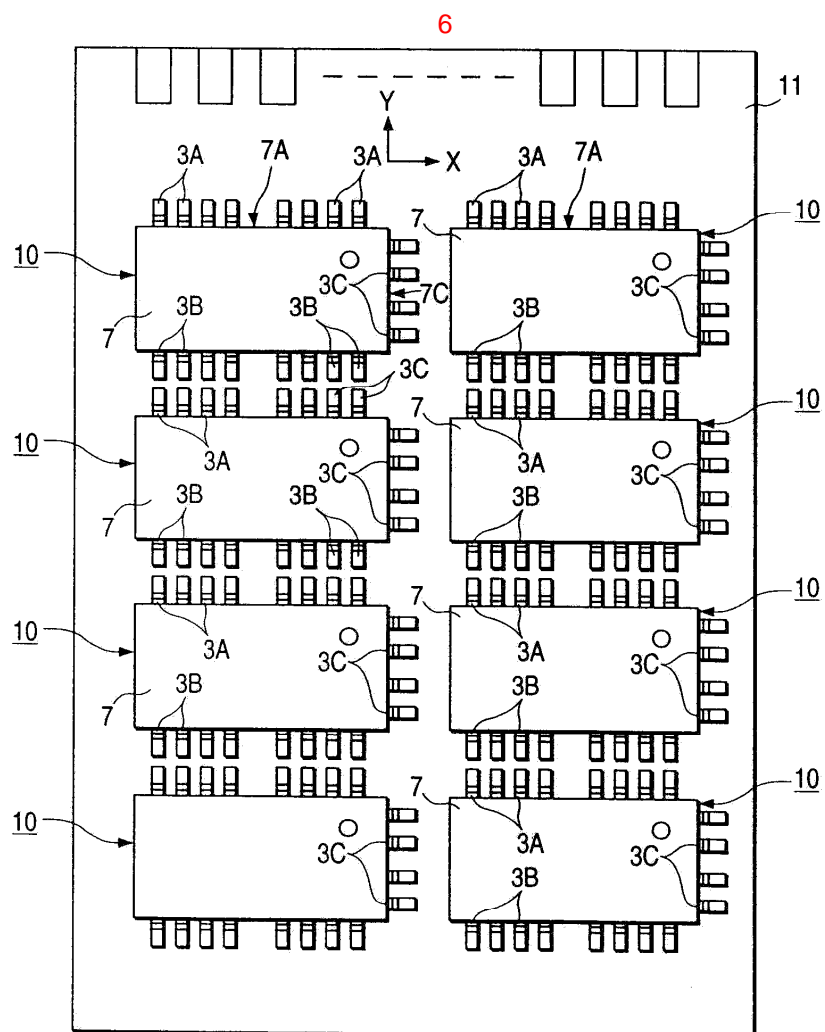




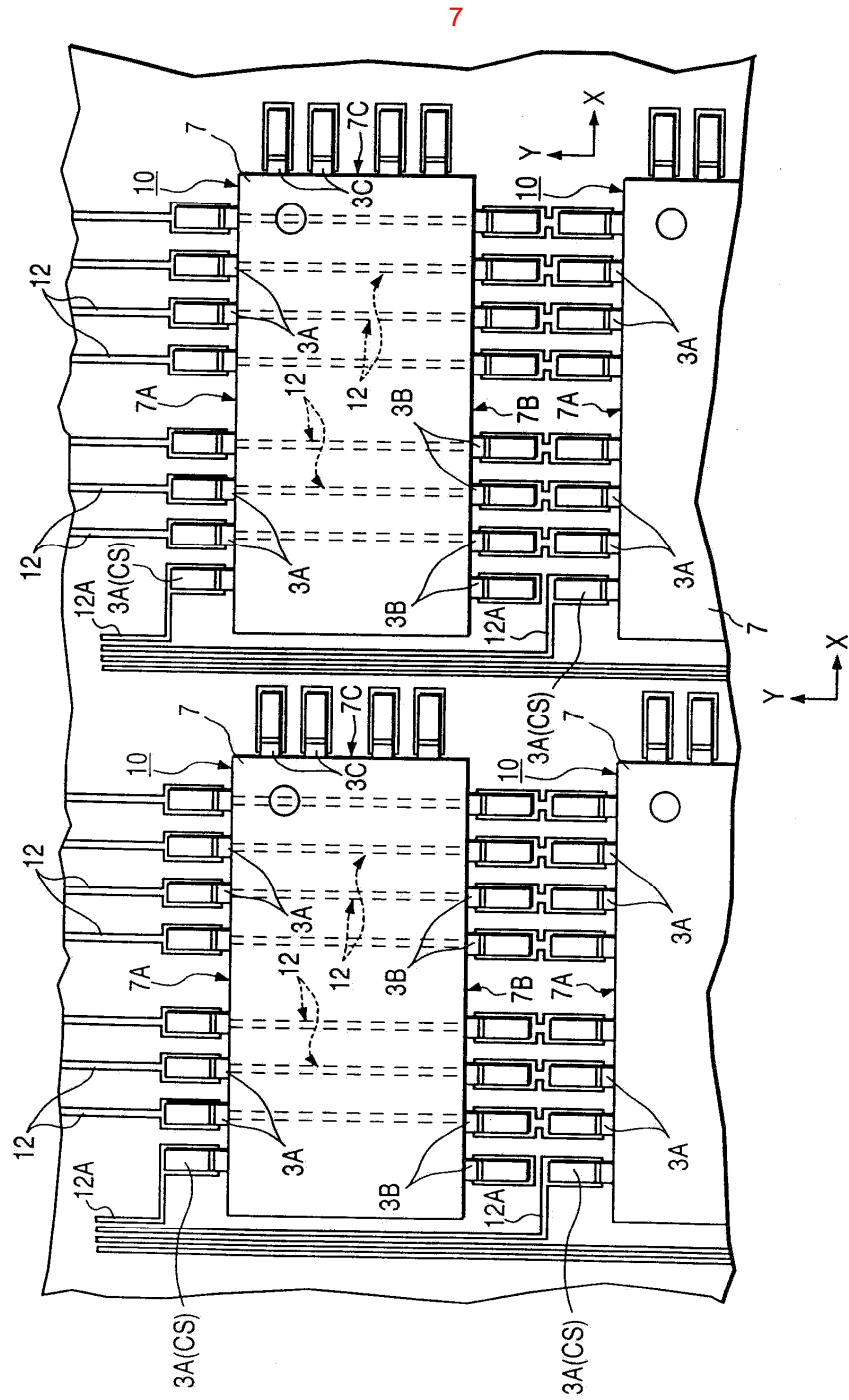




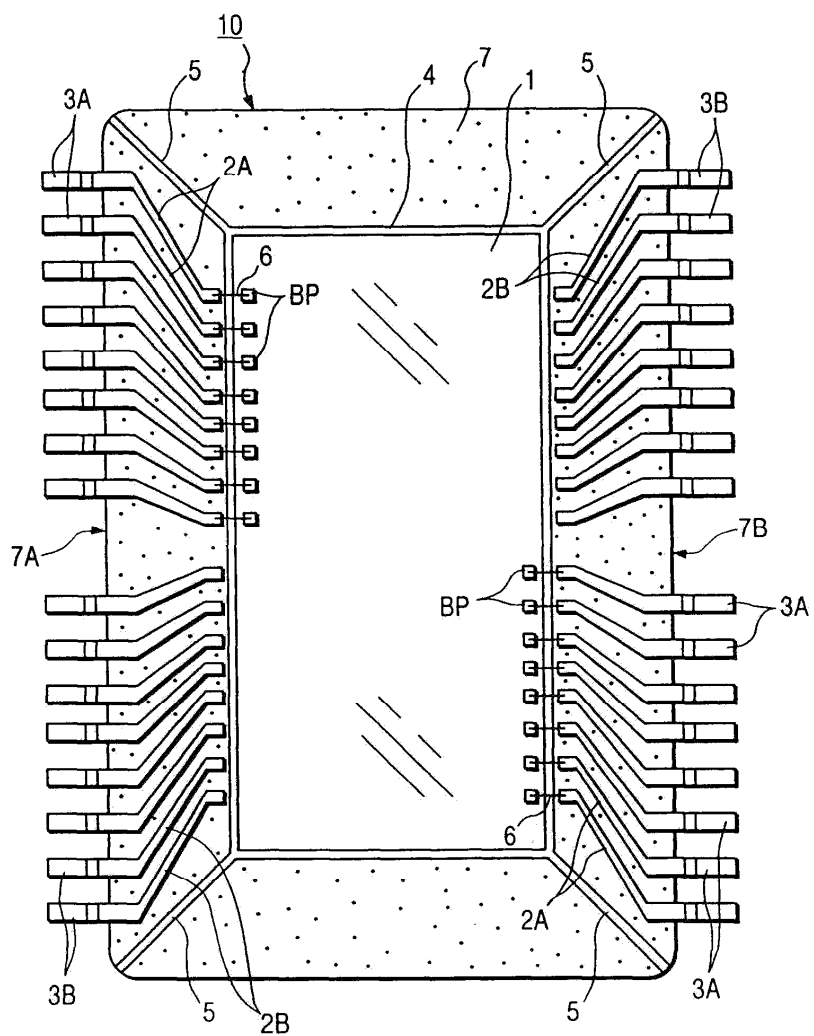


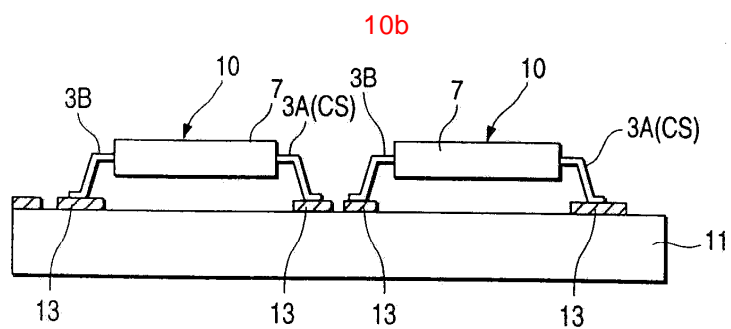
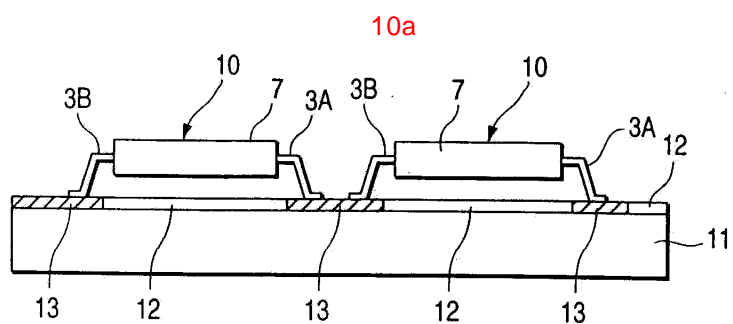
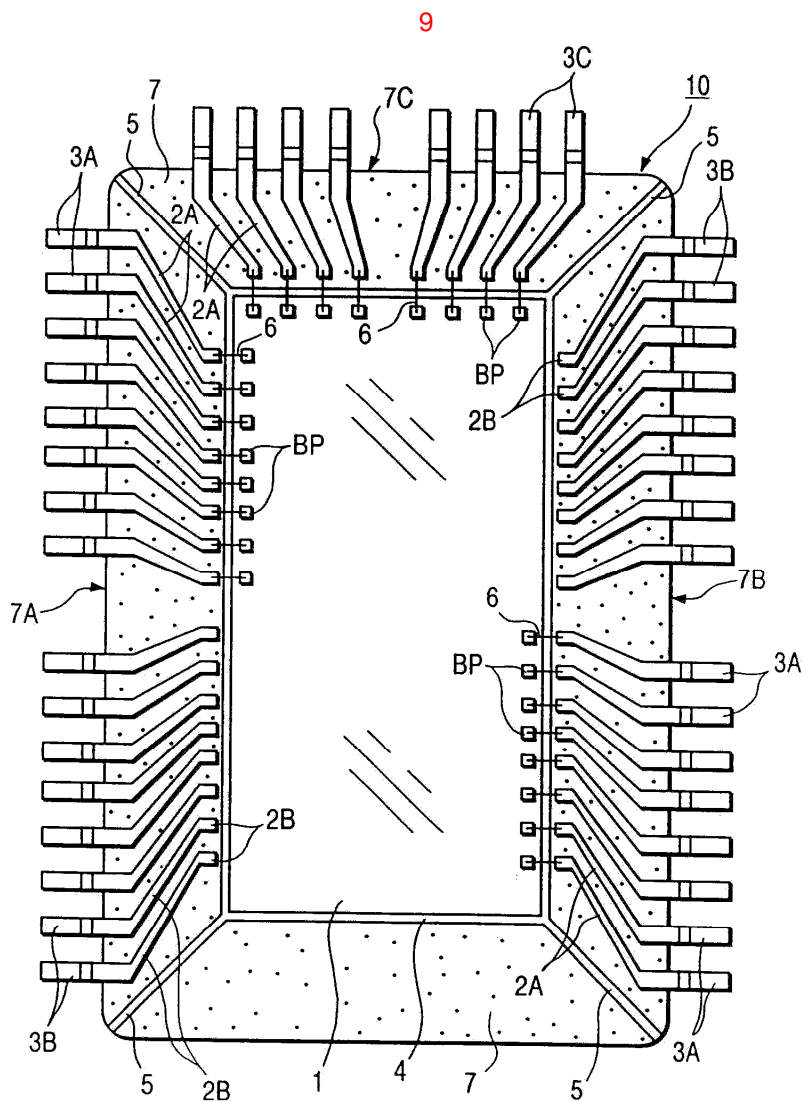


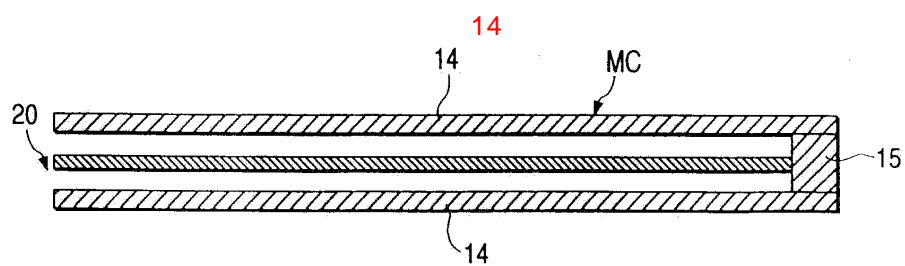
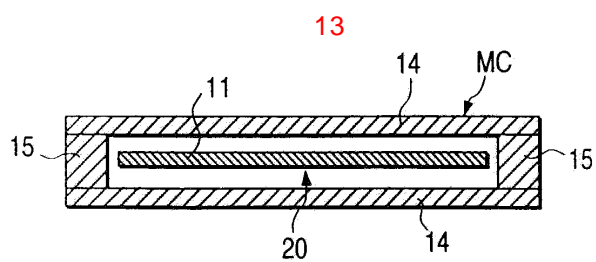
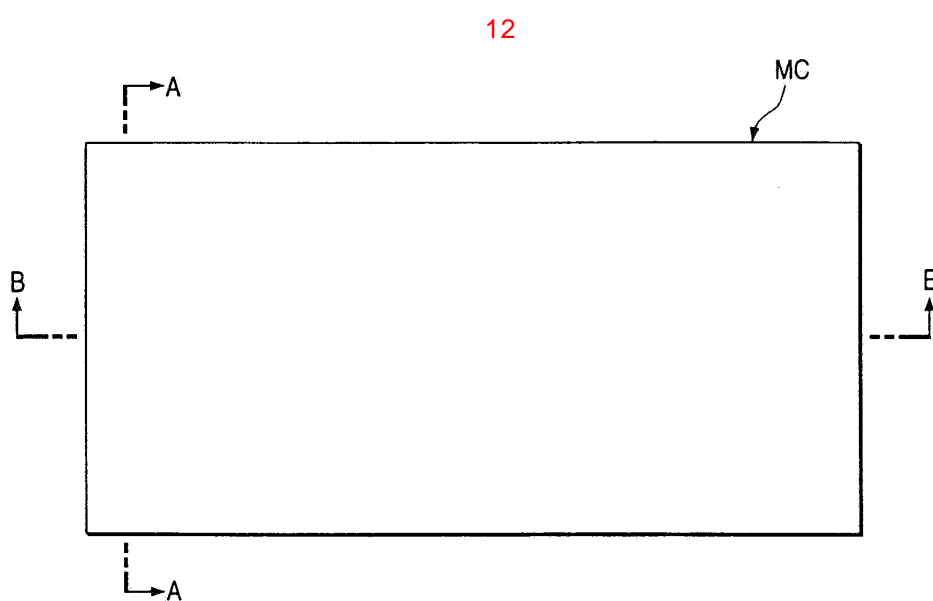
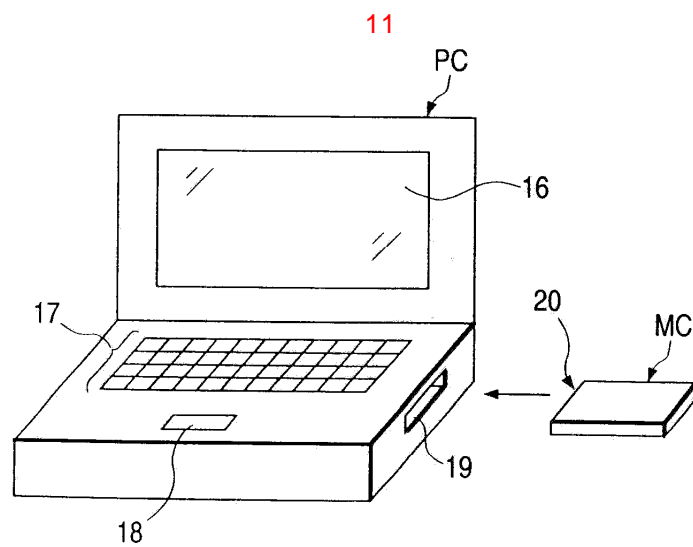


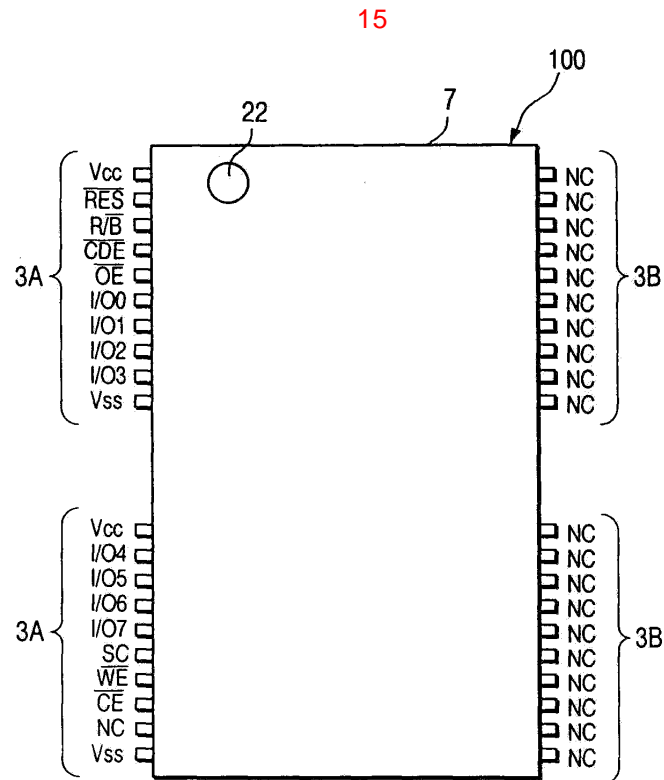


8









16

핀 설명	
핀 명칭	기능
I/O0-I/O7	입력 / 출력
CE	칩인에이블
OE	출력인에이블
WE	라이트인에이블
CDE	코맨드 데이터인에이블
Vcc	전원
Vss	접지
R/B	레디 / 비지
RES	리셋
SC	직렬클럭
NC	비접속

17

