

(19) (KR)
(12) (B1)

(51) 。 Int. Cl. ⁶ (45) 2002 05 02
H01L 21/82 (11) 10 - 0334598
 (24) 2002 04 16

(21) 10 - 1999 - 0009747 (65) 2000 - 0005616
(22) 1999 03 22 (43) 2000 01 25

(30) 1998 - 173120 1998 06 19 (JP)

2 2 3

(72)		2 - 2 - 3	가	가
	가	2 - 2 - 3	가	가
		2 - 2 - 3	가	가
		2 - 2 - 3	가	가
	가	2 - 2 - 3	가	가
		2 - 2 - 3	가	가
가	가	2 - 2 - 3	가	가
		2 - 2 - 3	가	가
		2 - 2 - 3	가	가

(74)

(54)

(2) , (2)
 (3) , (2)
 (7) , (3) (2)
 (6a) (7) (6)

(3) .
 (4) , (4)
 (3) (4)
 4 μ m , (3)
 4.5 μ m 5.5
 μ m
 가

4

1

2 1 A - A'

3 2 B

4 1

5 ()

6 5 B - B'

7

8 ()

9 (blow trace)

10 ()

11

12a (3) (5)
 (3t) (5)

13 (3)

14 13 A - A'

15 14 E

16

17 ((6) (6a) ((L2) (7) (3)
18 (L1) (μm) (%)

19 DRAM(Dynamic Random Access Memory)

20

21 1

22 2

1 :

2 :

3 :

3a :

3b :

3c :

3t :

4 :

4a :

5 :

6a :

6 :

7 :

7t :

9 :

5,589,706

(厚膜化)

가

가

, 3

가

가

가

가

2

$4\mu\text{m}$, , $4.5\mu\text{m}$ $5.5\mu\text{m}$

2

가

가

가

μm $5.5\mu\text{m}$

$4\mu\text{m}$, , 4.5
가

2

가
가

가
가

가
가

가

가

가

가

가

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2

가

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가

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1

4

(1)

(3)

(2)

3

(2)

,

(1)

(3)

(3)

(3)

(6)

(3)

(4)

(4)

(3)

(3)

4

(5)

(3)

(5)

,

(4)

,

(3)

가

(3)

,

가

(3)

(3)

(3)

3

가

가

(3)

(3)

, 5 11 , (電場)

$$(3) \quad m(=n - i \times k), \quad (3) \quad n - 2 \quad (\text{矩形}) \quad k - 2 \quad . \quad (n^2 - k^2) \text{ 가}$$

, 5 6 , (3) (5:)
 C (3)) (5) , 8 , (3) (

, (3) , , , , 10ns
 (4a) , 9 (3) (3) (3)
 . , (6) (6a)

$$, \quad (3) \quad \quad \quad (4) \quad \quad \quad . \quad \quad , \quad (3) \quad \quad \quad (4) \\ (4a) \quad \quad \quad , \quad \quad \quad , \quad \quad (3) \quad \quad \quad , \quad \quad , \quad \quad (6) \\ (6a) \quad \quad \quad . \quad \quad \quad . \quad \quad \quad . \quad \quad \quad .$$

, (3) (3) (5), (3) (

가 , (3) , (3) , (6) (6a)
가 . , (5)

(3) , 3000K (3)
(3) , (3) (4a) (5) 가

, (3) (5) (4a), , 11 (4a), , (6a)

, (3) 1.0μm, (3) 4μm, (3)
 (4a), 8μm 10μm . , (3) (6a)
 10μm 가 . , (6a)
 가 . ,

, (3) (4a)

, (6a) , (7) (3) 가 .
 (6a) , , 가 .
 , (7) (3) (3) (16 P1) 6.5μm , (7) (7)
 (4a) , (4a) (7) 0.15% . , (7) 0.65
 % , , 1/4
 , 18 (3) (3) (%) 0.025% , (3)
 (μm) 4.5μm 5.5μm 4μm 4.5μm 5.5μm 가
 , (7) (7) (3) , , ,
 , (7) (7) , (3) , , ,
 , (3) (7) DRAM , DRAM
 ERAM
 , , ,
 ,
 (57)

1. (2) ,
 1 (2) ,
 (3) ,
 1 (2) , (3) (3) (7) ,

(3)

(7)

2

(4) ,

2

(4)

,

(3)

(6a)

(6)

,

(3)

 $4.5\mu\text{m}$ $5.5\mu\text{m}$

.

2.

1

,

(7)

(3)

(7)

(7)

(7t)↗

.

3.

1

,

(3)

,

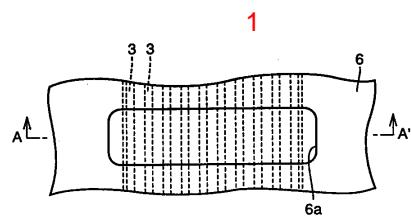
(7)

(3)

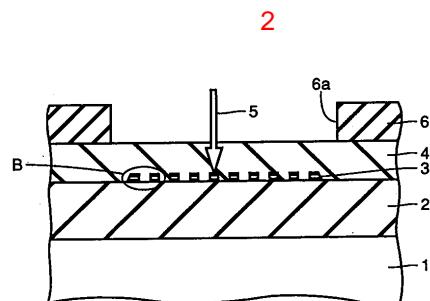
,

2

.

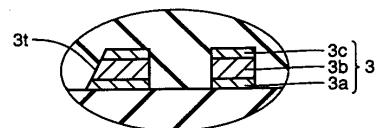


1

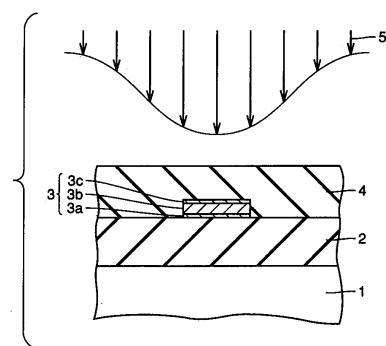


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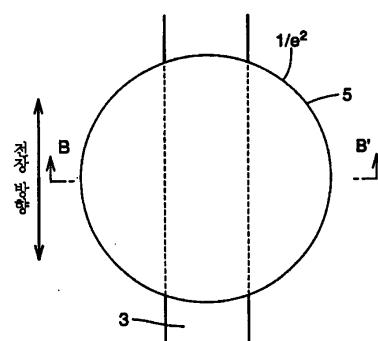
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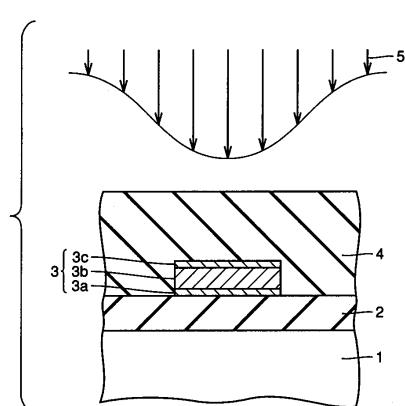
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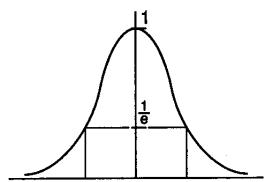
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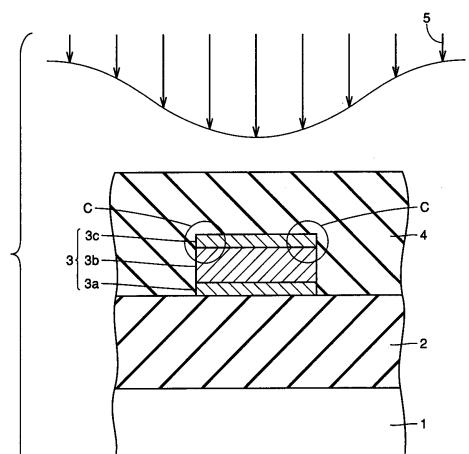
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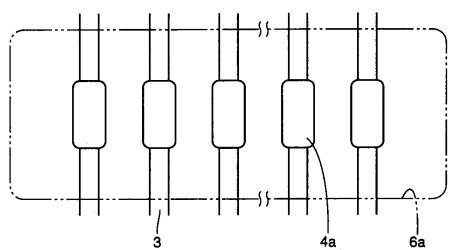
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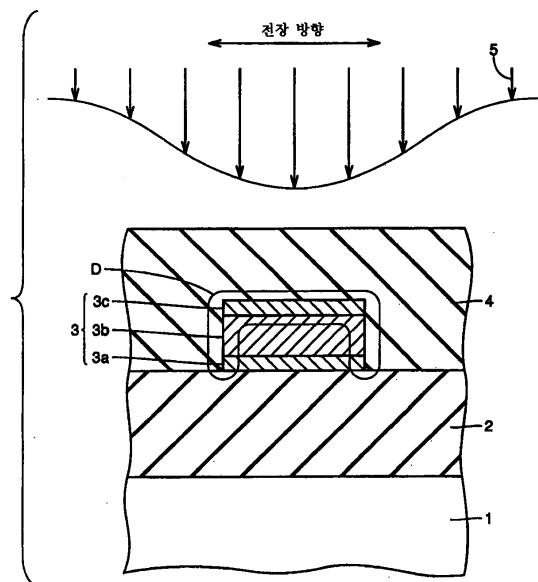
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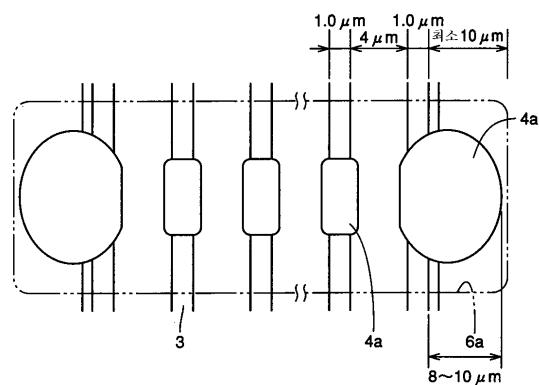
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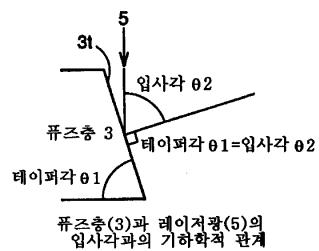
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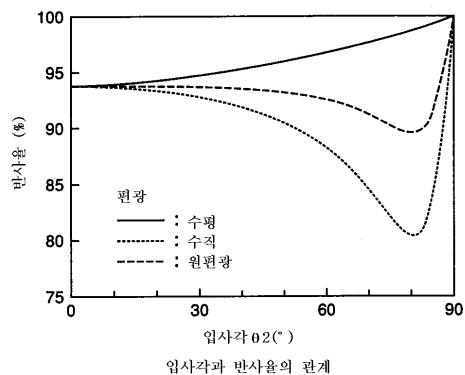
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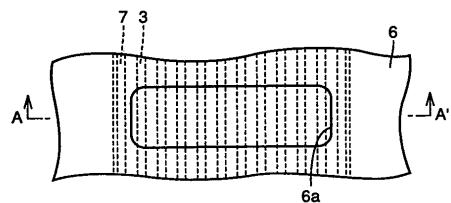
12a



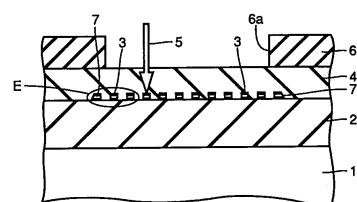
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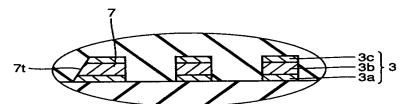
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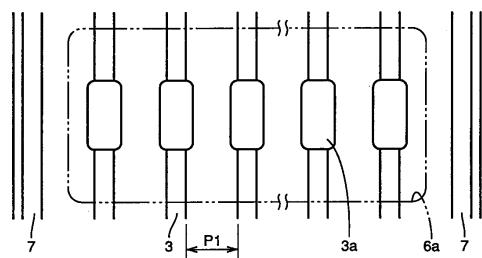
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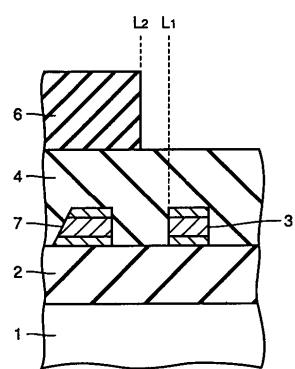
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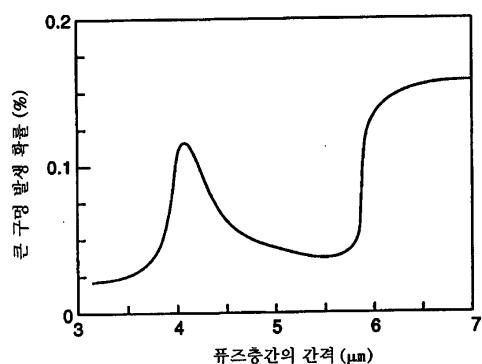
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17

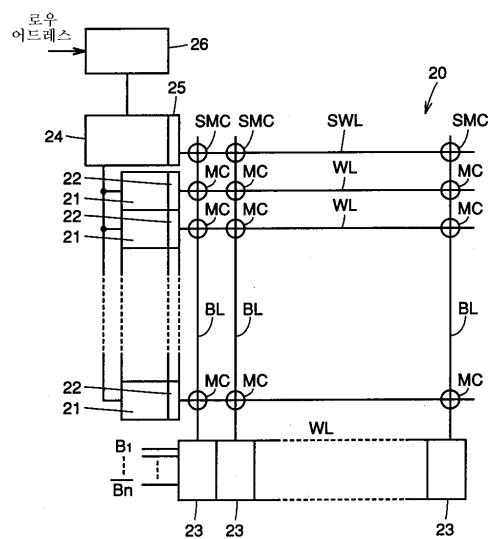


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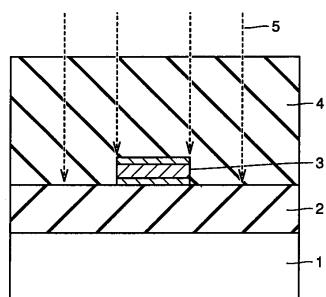
19

(종래 기술)



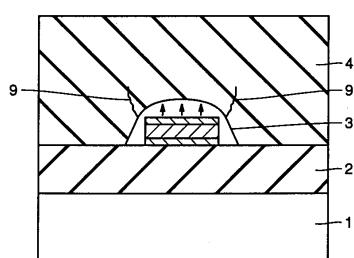
20

(종래 기술)



21

(종래 기술)



22

(종래 기술)

