

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl. ⁶
H01L 29/74

(45)
(11)
(24)

2002 07 27
10 - 0322288
2002 01 15

(21)
(22)

10 - 1993 - 0013107
1993 07 13

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(43)

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1992 07 15

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(72)

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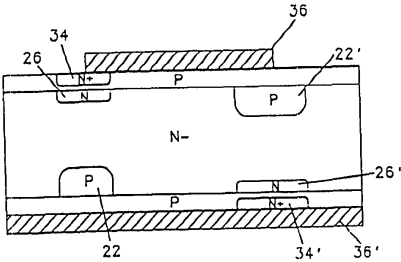
(74)

:

(54)

가 . , 가 .

제 2 I 도



1 .

2A 2I 1 .

3 2 .

4 3 .

5 4 .

* *

10 :

12 : N -

14 :

16 :

sor) . (solid state suppressor)

가 ,

N

가 " N" " P"

N⁻ N⁺ N

1 mil 가 , 100 mil x 100 가

10 mil 가 ,

가 가 .

P N . N

N , P N N

18 350 volts N- N- (passivation) 1~

2 mil 1.5 mil , P 5 mil 가

가 N- N- N- 가

가 가 가 가

P+ N- 가 가

2 가 가

가 1 , 1 가 ,

가 2

N-

2 , :

2 1 , 가 ,

;

(concavity) , 1

;

1 1 ;

2 2 3 ;

1 2 3 1 1

4 .

2 , 2 5

,

1 , 가 10 (1)
가 .

2A - 2I .

N⁻ (1) 12 (2A) .
10 mil .
(14) (2B) .

2C , (16) ()
UV (不溶) . 가
(UV) 2C 가 . (18, 1
8') 20, 2
0' (12) 2
(22, 22') , N - 가
(18, 18') (2E) .

(Photolithograph) (24, 24') (phosphorus)
2 , N (1
:26, 26') (2F) .

, P (2) (28, 28') P(2) (30, 30') (2G
) .

, (32, 32') ,
N⁺ (1) (34, 34') (2H) .

, 가
(36, 36') .

, 2I 가
(22') (22) ,

. 21 N⁻ 가
(38, 38') ,

가 가 - 40 25 μ s 3 μ s
" " .

, 50 A 10/1000 μ s 100A

가 가 가 , 가
 가 . 10 kv/ μ s 15 V
 100V
 4
 N (42,42'), P (well)" (44,44'), P (46,46') N⁺ (48,48') (concavity:40,40') (12)
 P , P
 , N⁻ 가 " " N⁻ 가 P ()
 , N⁻ " " P () 2A 2I
 N⁻
 5 (54) (56)가 (50) (52)

(57)

1.

2

1

;

가 ,

(concavity)

, 1

;

1

1

;

2

2

3

;

1

2

3

1

1

4

2.

1

,

2

3.

1 ,

1 10 mil

4.

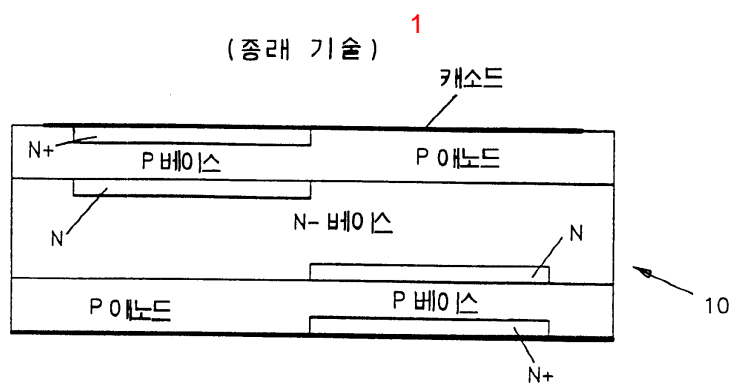
1 3 ,

2 2 5

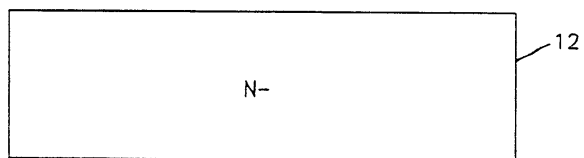
5.

1 4 ,

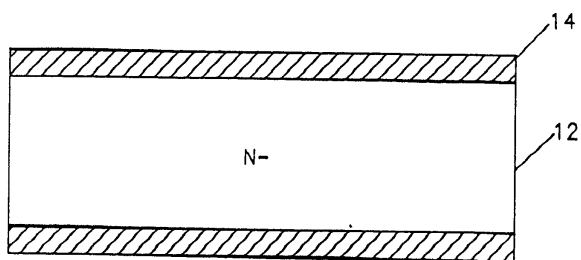
1 N , 2 P



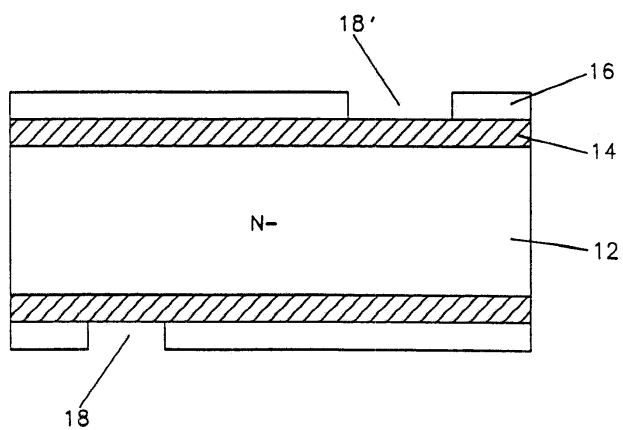
2a



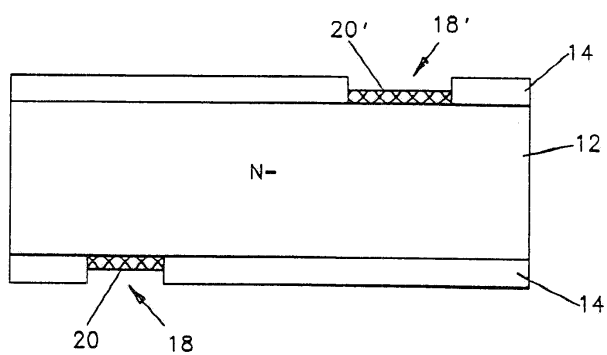
2b



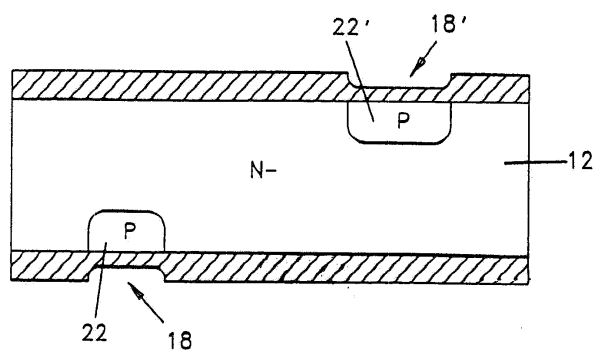
2c



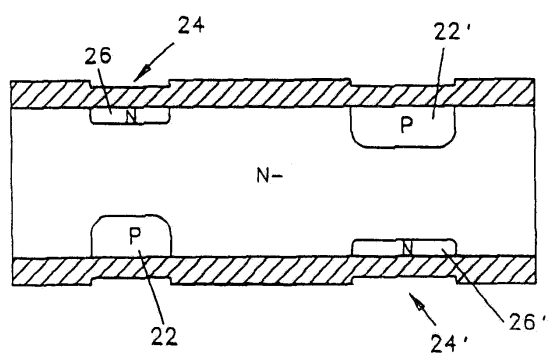
2d



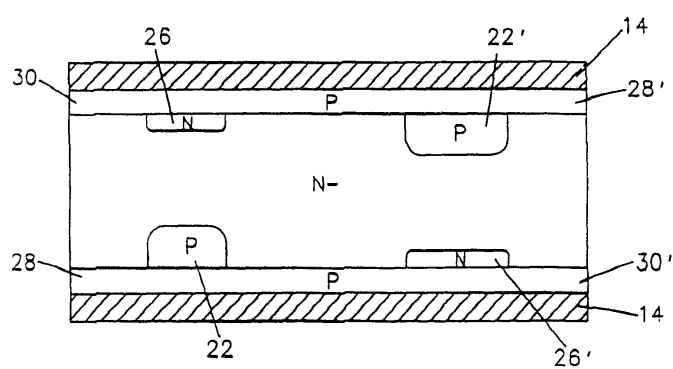
2e



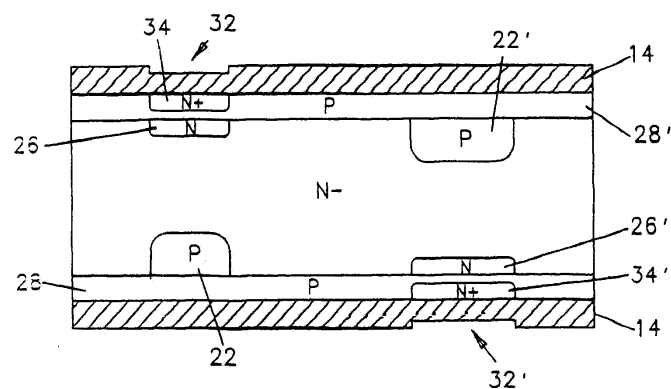
2f



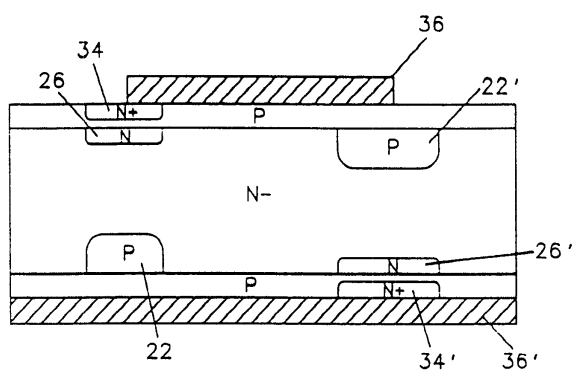
2g



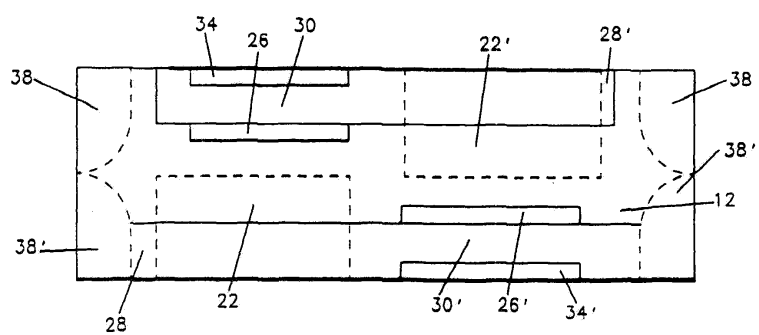
2h



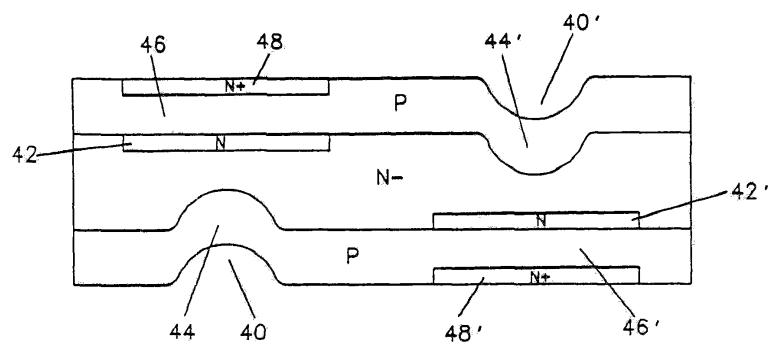
2i



3



4



5

