

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
G01R 1/06

(11)
(43)

10-2004-0105035
2004 12 14

(21) 10-2003-0035870
(22) 2003 06 04

(71) 가 60-29

(72) () 308 1701

11 180-122

3 1-377

:

(54)

1

(Hole)

2

가

가

OD(Over Drive)

1

1

,

.

(Pitch)

2

2

가

2

, , ,

1 1 2 2 2

1 N() 가 3 가

가 1a (22)가 (12)가 (20) 가

(12) 가

가 1b (20) (F) () (22)

(20) OD(Over Drive) (12) (22)

(Scrubbing) (12) (22)가 (12) (22)

(22) (12) (22) 가 (12) (22)가 (20)

(Chip) EDS(Electrical Die Sorting)

가 EDS 가

OD(Over Drive) OD(Over Drive) 가

(Pitch) 가 가

(F)

(Bal type)

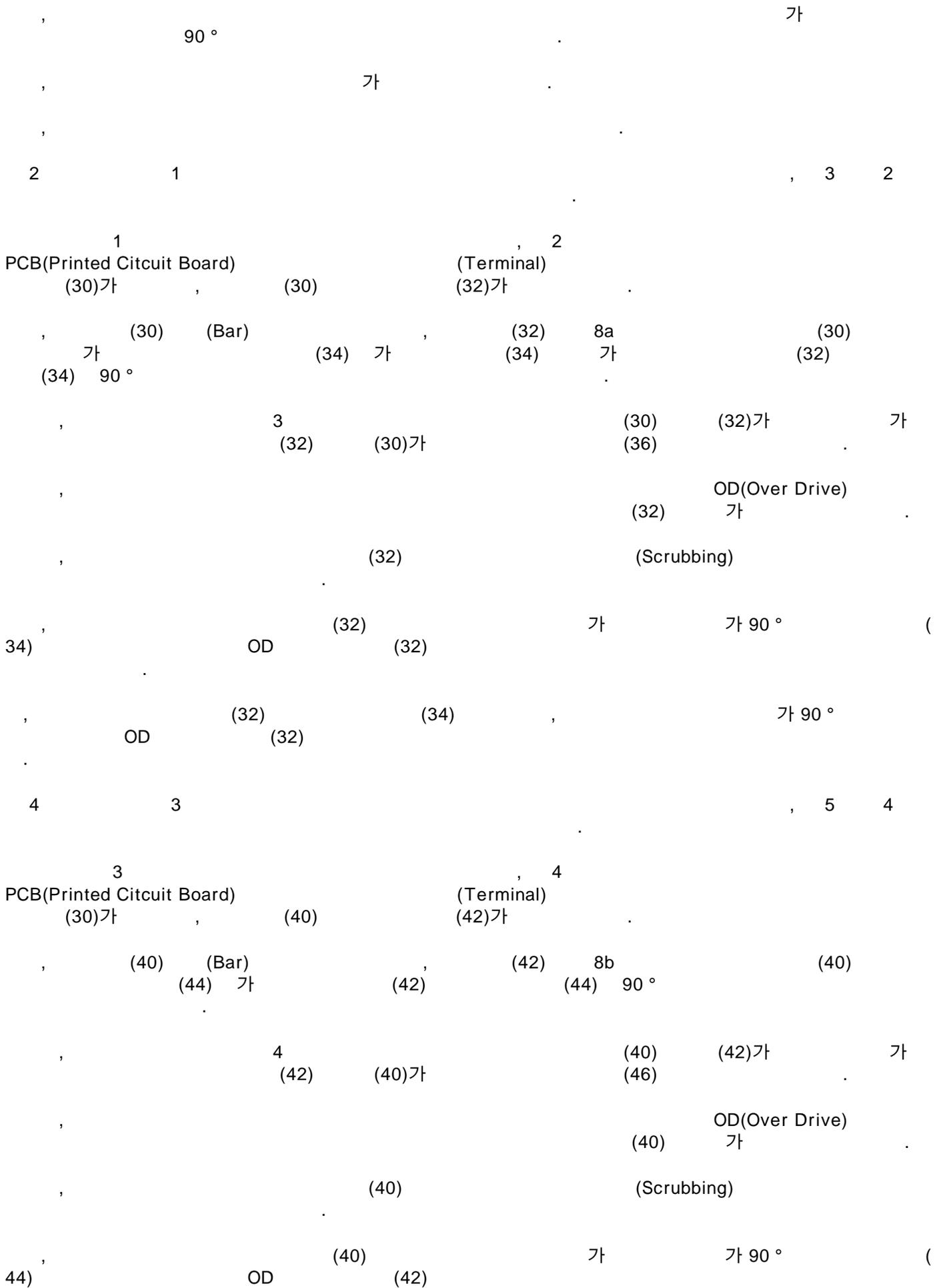
1 (Hole) 1 1

2 2 가 2 가

가 가 가

90° 가 가

가 90°



(106) (Seed) (Sputtering)

9d (106) (100)

2 (108)

2 (108)

9e (108) (Ni) (110)

(100) CMP(Cheical Vapor Deposition), (Etch-back) (Grinding)

(110) CVD(Cheical Vapor Deposition), PVD(Physical Vapor Deposition)

CVD PVD (106)

9f (104) (110) (100) 2

(108) (100) (ChemicalO (112))

10a 10h

가 (Silicon) (200) 10a (100) 1 (Etching)

202) (202) 8a 8e (202) (Photolithography)

1 (202) 1 (202)

10b 가 (10) 1 (202)

(Hole : 204)

SF₆, C₄F₈, O₂ 가 RIE(Reactive Ion Etching)

(Bosh process)

10c 1 (202) 2 (206)

(202)

10d (200) 2 (206)

(204) (204)

(Bosh process) RIE(Reactive Ion Etching)

10e 2 (206) (204) (200)

(Seed layer : 208)

2 (206) 1 (202) (208)

(Sputtering)

10f (208) (200)

3 (210)

3 (210)

back) 10g (212) (Grinding) (204) (200) 3 (210) CMP(Cheical Vapor Deposition), (Ni) (Etch-
 position) (212) (200) CVD(Cheical Vapor Deposition), PVD(Physical Vapor Dep
 CVD PVD

10h (200) (212) (200) 3 (210) (214)

90 ° 가

OD(Over Drive)

(Pitch)

가

가

(Ball type)

90 ° 가

가

(57)

1.

1

(Hole)

1

1

2

2

2

가

가

2.

1

90 °

가

가

가

3.

1

가

90 °

4.

1

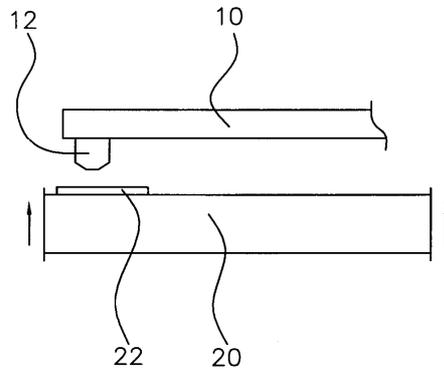
90 °

가

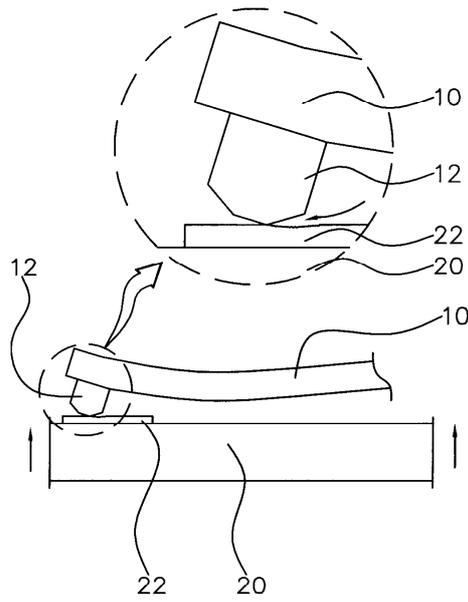
5.

2 4 , 가

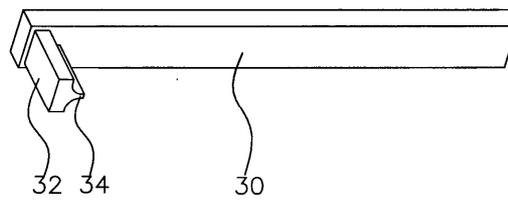
1a



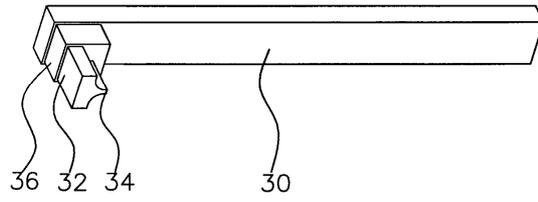
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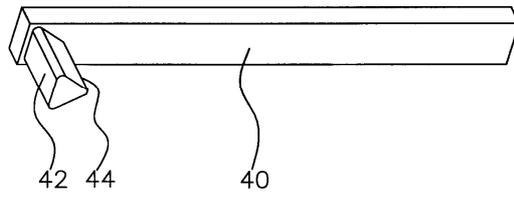
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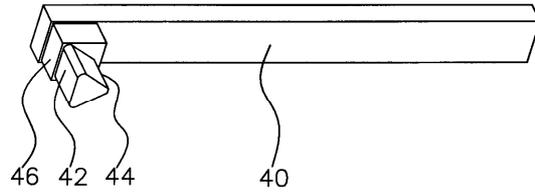
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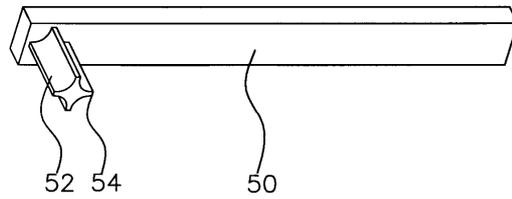
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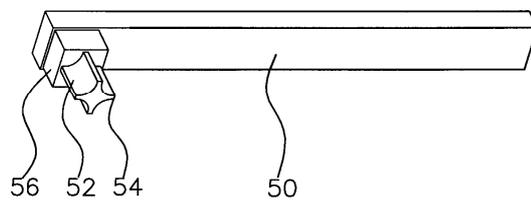
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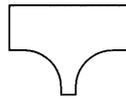
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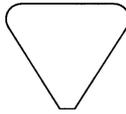
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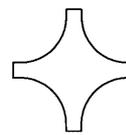
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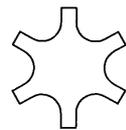
8b



8c



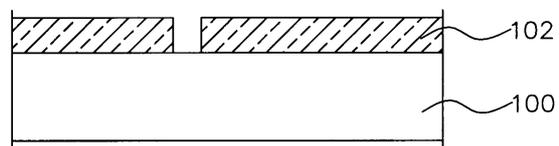
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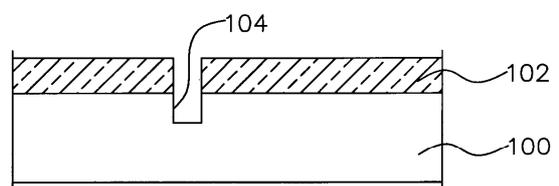
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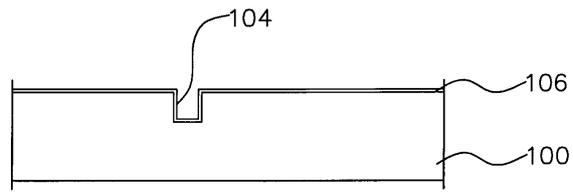
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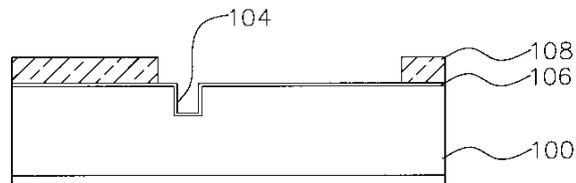
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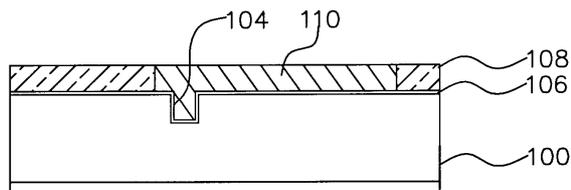
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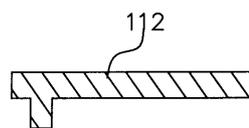
9d



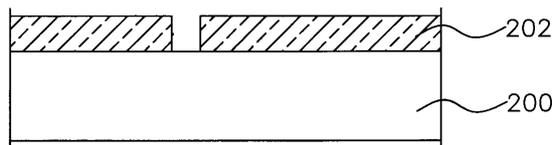
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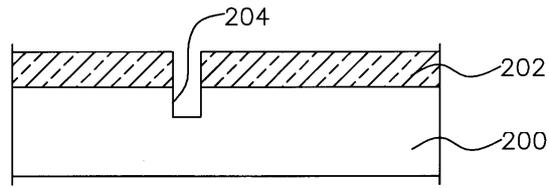
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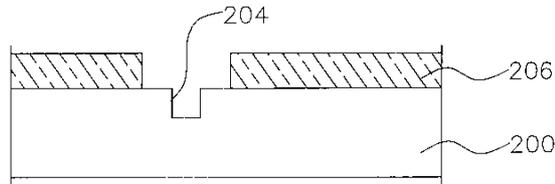
10a



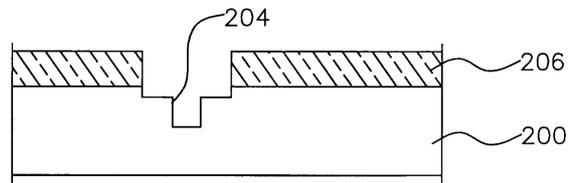
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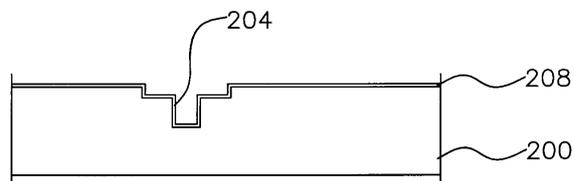
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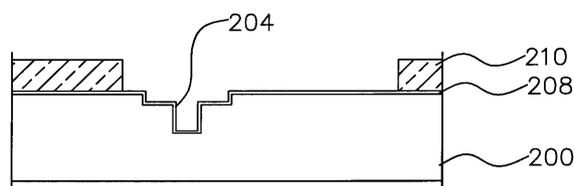
10d



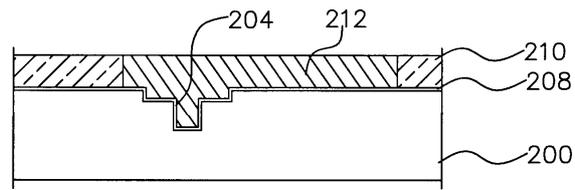
10e



10f



10g



10h

