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(71) 3 416

(72) 970 - 3 912 802

(74)
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(54)

	SOI	.	SOI	1	1	1
	,	,				
2	1	2	2		2	SOI
	1					
	가	가	가	가	가	

2

1a 1d

SOI

2 SOI .

3a 3d SOI .

4 SOI .

5 SOI .

6 SOI .

7 5 .

< >

110:

130:

140:

142: 1

144: 2

150:

SOI(silicon on insulator) , SIMOX(separation by i
 mplanting oxygen) SOI
 가 SOI .
 가 .
 , 가 가 0.5 μ m 가 가
 , 가 가 , SOI ,
 SOI 가 가 , ,
 가 SOI SIMOX ,
 SIMOX SOI 1a 1d

1a 1d SOI
STI(shallow trench isolation)

1a (buried oxide layer; 20) (10), (20) SOI (30) SOI

1b SOI (30)
(42)

1c SOI (30)
(42)
SOI (32)

1d USG (32) (34)
SOI MOS
SOI
가

SIMOX SOI
8 - 167646

SIMOX

4 - 67649 SOI

SOI
가 (LOCOS)

SOI
가 (void)
가

SOI

가

2

SOI

, ;
 , 1 1 1 1
 ;
 , 2 2 1
 2 2 SOI .
 , ;
 , 1 1
 1 1 1 ;
 , 1 2 2
 , 1 2
 ;
 2 , ;
 1 2
 SOI(silicon on insulator) .
 SIMOX SOI , 2
 SOI
 , .
 , .
 2 SOI .
 2 , SOI (110), 1 (142) 2
 (144) (140) (140) (150)
 , (150) (140)
 , 가 .
 , ,
 , . ,
 .

(140) 1 (141) 1 (143) 1
 (142) 2 (147) 2 (145) 2
 (144) . 1 (142) 2 (144)
 가 1 (141) 2 (147)가

2 , 0.21 μ m 0.07 0.7 μ m 가 1
 , 0.21 μ m 가 1 가 0.04 0.6 μ m , 2
 가 1 2 3.5 가 , 2
 가 0.14 1.4 μ m 가 . 2

SOI 1 (142) 2 (144)

SOI SOI 3a 3d . 3a 3d
 SOI
 3a , (100) (112) (100) , SOG
 (112) 가

1 , 2
 0.05 0.5 μ m 가 .

3b , (112) (100) 1
 (112) 가 (125)
 (112) 가 (112)

(112) (110) 1
 (120) (130)

0 KeV 1 , 1 0.21 μ m 320 z^+ , 60 8
 , 1x10¹⁸ 8x10¹⁸ cm⁻² , 60KeV
 , 0.14 μ m

3c , 1 (120) 1

2 (112) 2 (132) (112)

(120) (112) , 1

1 2 (120, 132) , 2 (112) (132)

2 (112) 2 (132) (112)

(112) (112) , 1

(120) , (112)

10^{18} cm^{-2} 가 , 32O_2^+ , 20KeV , 2 1×10^{18} 8x

1 2 , 1 2 , 10 ° 가 10 ° 가

3d , (112) , (14)

0) (150) SOI .

1100 1300 가 2 7

가 가

4 , SOI (152) (145)

SOI , , ,

SOI MOS

5 6 SOI

5 (154a) (154b) (154)

6 가 (156)

가

7 5

(154)

7 DRAM

DRAM

7

154

가

(160)

7

가

SOI
SOI

가

가

가

가

가

가

(57)

1.

;

1

1

1

1

;

2

2

1

2

2

SOI(silicon on insulator)

2.

1

SOI

3.

1 , 1 2 가 SOI .
4.

1 , 1 2 가 0.07 0.7 μ m SOI .
5.

1 , 2 가 1 2 3.5 SOI .
6.

1 , 1 가 0.04 0.6 μ m , 2 가 0.14 1.4 μ m S
OI .
7.

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

1 2
SOI(silicon on insulator) .

8.

1×10^{18} , $8 \times 10^{18} \text{ cm}^{-2}$ 1 320_2^+ , 60 80 KeV , 1
SOI .

9.

$8 \times 10^{18} \text{ cm}^{-2}$ 2 320_2^+ , 20KeV , 2 1×10^{11}
SOI .

10.

7 , 가 1100 1300 2 7
SOI .

11.

10 , 가 SOI .

12.

7 SOI , , SOG

13.

7 2 SOI , 1 ,

14.

7 , 0.05 0.5 μ m SOI

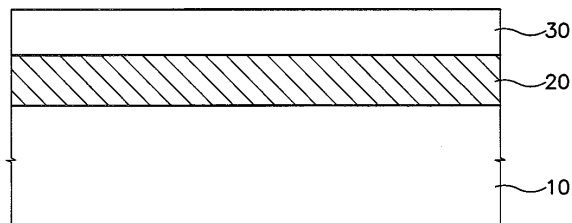
15.

7 , 1 2 , 0 $^{\circ}$ SOI

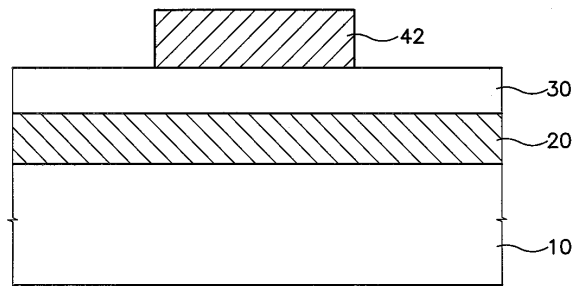
16.

7 , 1 2 SOI

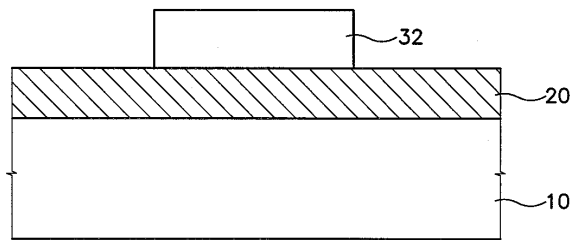
1a



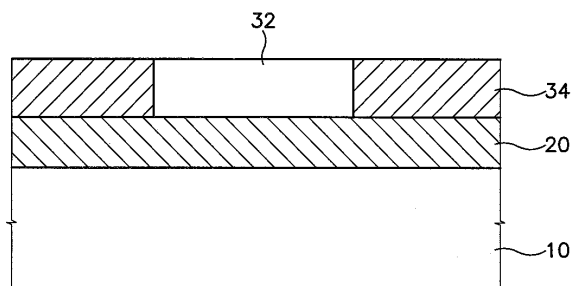
1b



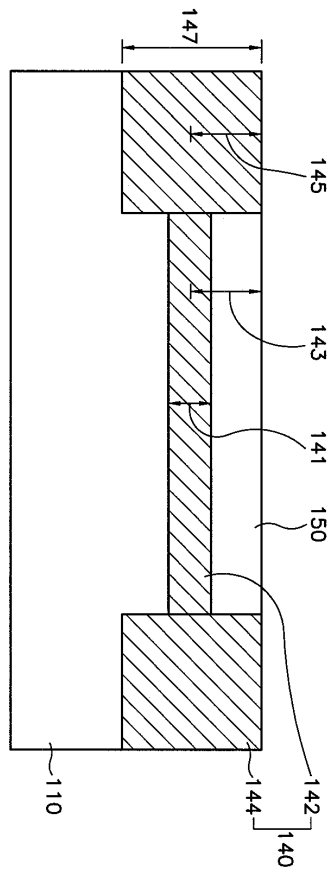
1c



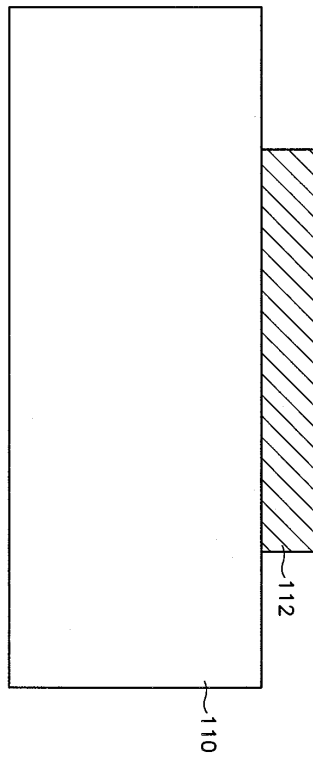
1d



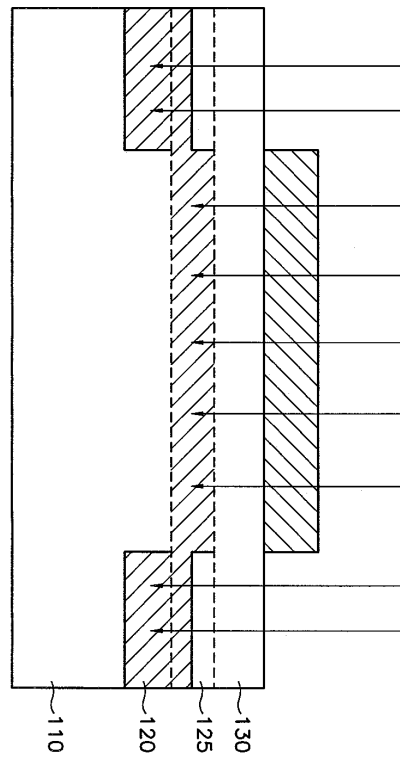
2



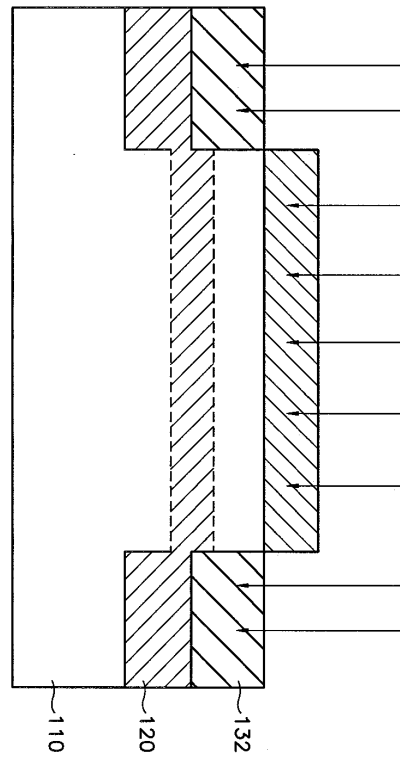
3a



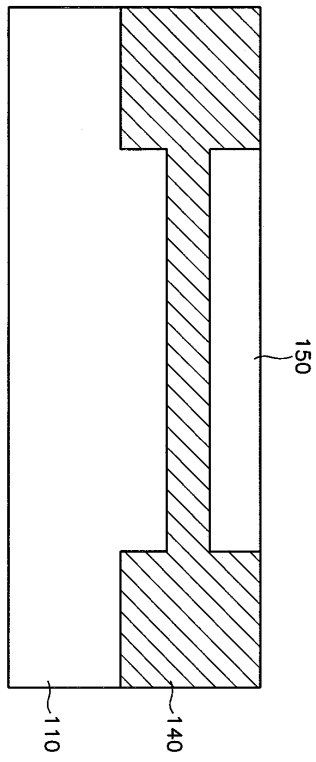
3b



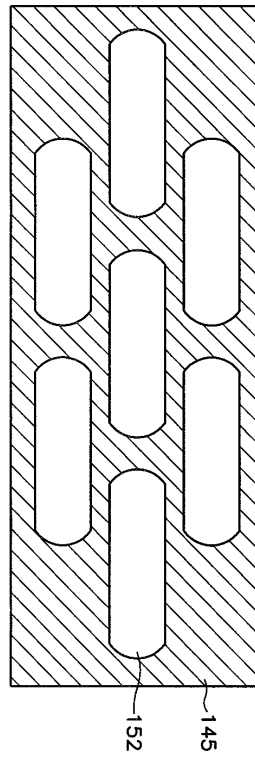
3c



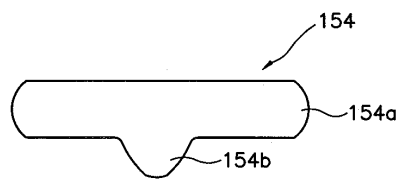
3d



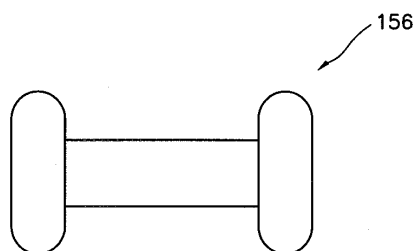
4



5



6



7

