

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

(51) 。 Int. Cl.<sup>7</sup>  
B41J 2/01

(45)  
(11)  
(24)

2003 06 19  
10-0388181  
2003 06 05

(21) 10-2001-0004230  
(22) 2001 01 30

(65)  
(43)

2001-0078153  
2001 08 20

(30) 2000-022959 2000 01 31 (JP)

(73) 가 가 3 30 2

(72) 3 30-2 가 가

(74)

:

(54) ,

가 . 4

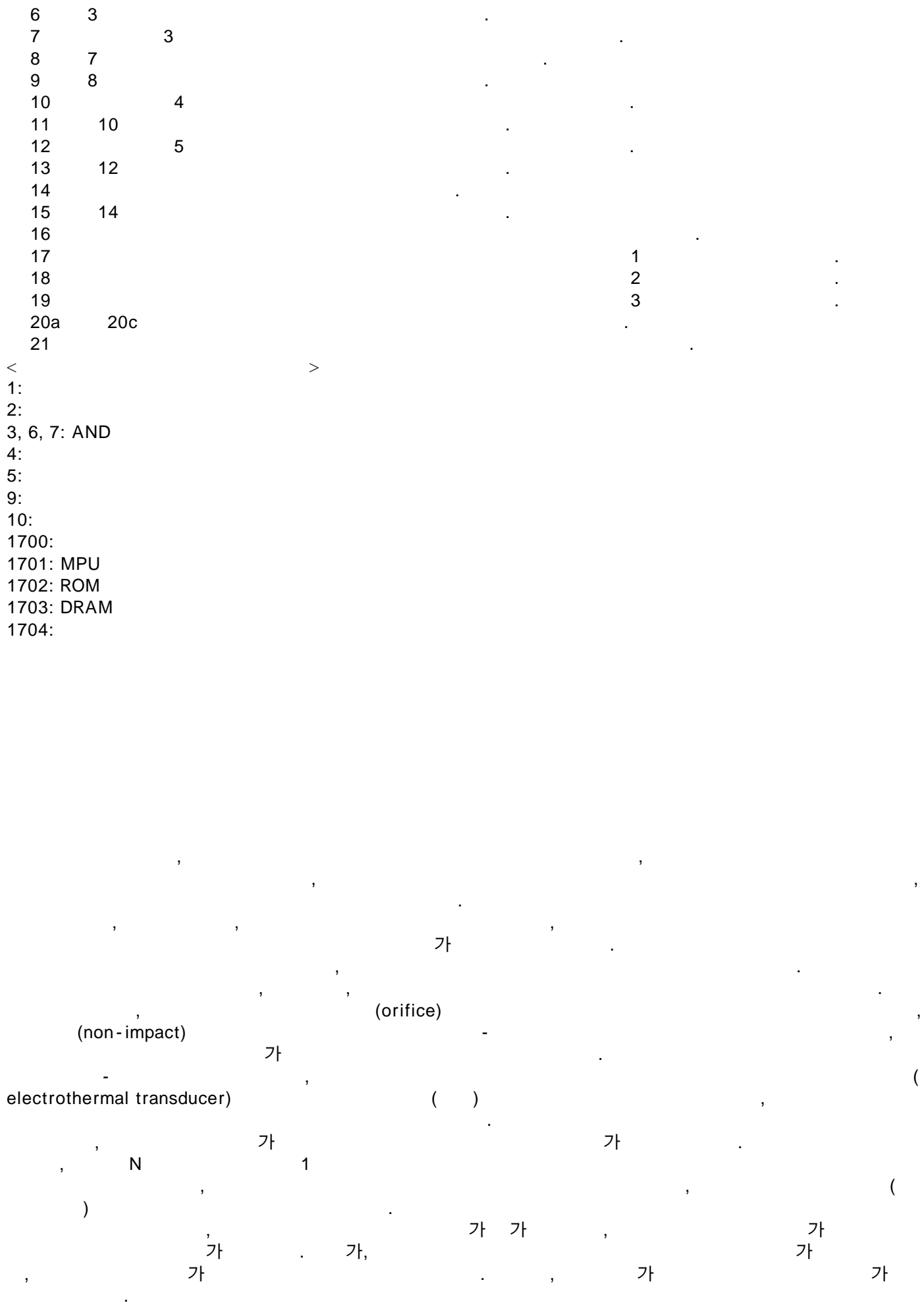
. 4 , 1 4

.

1

, , , ,

1 1 .  
2 1 .  
3 2 .  
4 3 .  
5 4 .





가 가 가

가

1

2

3

가,

가

가

가

가

가

가

가

2

[ 1 ]

1 1

1

1 가 1

1 2

(2)

(2) 가

FET

AND AND

(1),

(8) (2) 1

AND (3)

(segment) (5)

2

DATA가

4

CLK,

ENB,

SEL,

DATA가 4 DATA

SEL

가 (5)

가 1 4

, 8

가 (directly continuous) 가 (serially transferred)

DATA (4) (5)

4 1 4

1 16 (8) 4

1 16 1 2

56

AND (6 7) 가 , 256 가

2 1 1

1 16 1 4 2 DATA 16

4 (16 ) 가

CLK SEL OFF 가 DATA [3..0] (5)

16 SEL 1 4

CLK "4", "7", "A", "3" 1 16 "4", "7", "A", "3"

CLK가 4 1 2 ENB

CLK가 , R1 R16 16

16 , 256 가

가

가

가 / 가 가

[ 2 ] 가 3 2

2 가 1

가

352 x2 , 704 가 , 1

가 8 , 0 8 가

44

2 , 352 (1), (3), 3/8 4

(2), (5), 3 (4), 44 3 (4'), 4 (8'), 1

1 4 가 VH 4x11 (8) G

1 NDH (1) GNDL

VDD GNDL SUB

GNDH 4 DATA0 DATA3, CLK, OHE1N, E

LATN,

HE1N, OHE2N, EHE2N . 4 (

) 4 3 . 5 CLK

10MHz 가 ,

4 DATA0 DATA3 4 (4') 44 (8') (4) 4×11 (4')

(8) E<sub>0</sub> E<sub>2</sub> 3/8 (5) 1 8 . 3

e0 e7 44 e0 e1 1 Seg 1, 2, 17, 18,...

3 Seg 3, 4, 19, 20,...

2 BLK B0 B43 8

, B1 Seg 2, 4, 6, 8, ..., 16 B0 Seg 1, 3, 5, 7, ..., 15

2 × 2( ) 가 (5) ENB BLK , 2 35

DATA [3..0] 3/8 (5)

3 가 가 ,

6 BLK DATA LATN ENB1

가 (OH1N/EHE1N) , 가 (OHE1N, EHE1N/OHE2N, EHE2N)

, , 가 ,

pulse) (main pulse) , 6 , (pre-

가 ,

(interlaced)

, 2 , 가 ,

, 1 , 4 1

2 , 1 2 ,

가 10kHz , 가 . 600 가

가 ,

(crosstalk) , 가

, ENB ,

, DATA3 ,

가 가 2 ,

2 , /

가  
[ 3 ]  
3  
가 ( )  
3 4 , 3 4  
,  
,  
7 7  
(8)  
(1) 4 3  
, 7  
3 8  
, 7 가 , 8  
(8)  
(1) 4 4  
, 8  
4  
9  
,  
, 7  
, ( )  
가  
[ 4 ]  
4  
가 10 4  
1  
2  
10 , 4 8 ( ) DATA  
(4 8)  
(8)  
16  
1 R1 R16 , 2 R17 R32, 16  
(4) (5)  
(4)가 4  
1 (1) R1, R17, R33, R49, ...  
2 (2) R2, R18, R34, R50, ...  
1 2  
16  
256 /  
1 R (4) (5)

[ 1 ]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	...
1																										
2																										
3																										
4																										
...																										
13																										
14																										
15																										
16																										

R16) (8) 1 (4) (5) 2 ( , R1 , 256 , 11 10 , DATA , CLK , ENB (8) R1 R256 1 1 (4 (1) R1, R17, R33,...가 8) , ENB (5) 가 16 , 가 (R16, R32, R48,...) (4 8) 가 ( ) 3 2 , , 600 dpi 300 600 (full-line) 가 가 ,



[ 5 ]  
5  
4  
12 5  
(1) 가  
12 10 가 (11 12)가 (4 8) ENB  
가 , AND (6 7) DATA SEL 가 , 3 ,  
DATA , ENB  
13 , DATA , SEL 가 ON  
(11 12)  
CLK , SEL 가 OFF , DATA  
가 DATA ( )  
가 ( )  
가 (grayscale)  
[ ] 가 , 가  
가  
가  
가 ( )  
가 가  
가  
가  
[ 8-108550 ] , 가 , 가  
가 , 가 ( )  
가 , 가  
20a 20c  
(101) (112)가 17b  
(resin)가 (111)  
, SiN

20a (orifice plate)(102) (112) (121)

20c (103) (101) (113)가 (101)

[ 21 ]

21 (HC) (lead screw)(5005) (5004)

(5013) / (5009 5011) (HC) (IT)

가 ( ), 21 a b (IJH)

(IJC)가 (HC)

5002 (5000) (5006) 5016 (IJH) 5007 5008 (5013) (5022) (5015) (5022) 5019 5015 (5023)

가 5017 (5018)

가 5021 (5021) (5020)

(capping), (5005) 가

16 1700 1701 MPU 1702 MP

16 1703 1704 (IJH)

U(1701) ROM (G.A.) 1708 1706 1707 (1708)

DRAM (1700), MPU(1701), RAM(1703) 1709 (IJH)

1705 (1709) 가 (1700) (1706 1707)가

(1704) MPU(1701) 가 (1705)

17 16 (1704) 1 (1700) 16

(1720)

17 1719 (1726)가 ; 1720

1722 ; 1723 1724

(1704) (1703)

가 가 (1720)

(1723 1724) (1726) (1721) 가 (170)

4) (1722) 가 (1720)

가 18 2 17

1 (1725)가 가

(1719) (1720) (1720) (1723 1724) (1725)

(1725)가 (1719) 1/2 1 (1726)

(1725) 가 / (1726)

가

가

가 (1719) (1725) (1726)

19 3 (1723 1

724) 가 (1723 1724)

1

가

가

( )

4,723,129 4,740,796 가

( )

가 1 1 ( ) 가

가 ( ) 가

4,463,359 4,345,262 가

4,313,124

가

( 4,558,333 4,459,600 ) 가

59-123670 ,

59-13846

1

가

가

가

가

,가 ; ,가 가 .  
 , - , - ,  
 , , , 30 70  
 가 ,  
 , , 가 ,  
 , , 가 ,  
 54-56847 60-71260 , , 가  
 ( , ( , ) ,  
 ( , , ) CPU MPU  
 , 가 ,  
 , , , CD-ROM,  
 CD-R, ROM ,  
 OS( )  
 , 가 CPU  
 , , 가 ,  
 , 가 가 ,

(57)

1.

2.

3.



17.

15

18.

15

19.

15

20.

15

21.

15

**22.**

**23.**

22

24.

22

**25.**

**26.**

25

**27.**

25

**28.**

**29.**

28

**30.**

28

**31.**

28

**32.****33.**

32

**34.**

32

4

**35.**

32

**36.****37.**

36

**38.**

36

**39.**

36

**40.**

41.

40

42.

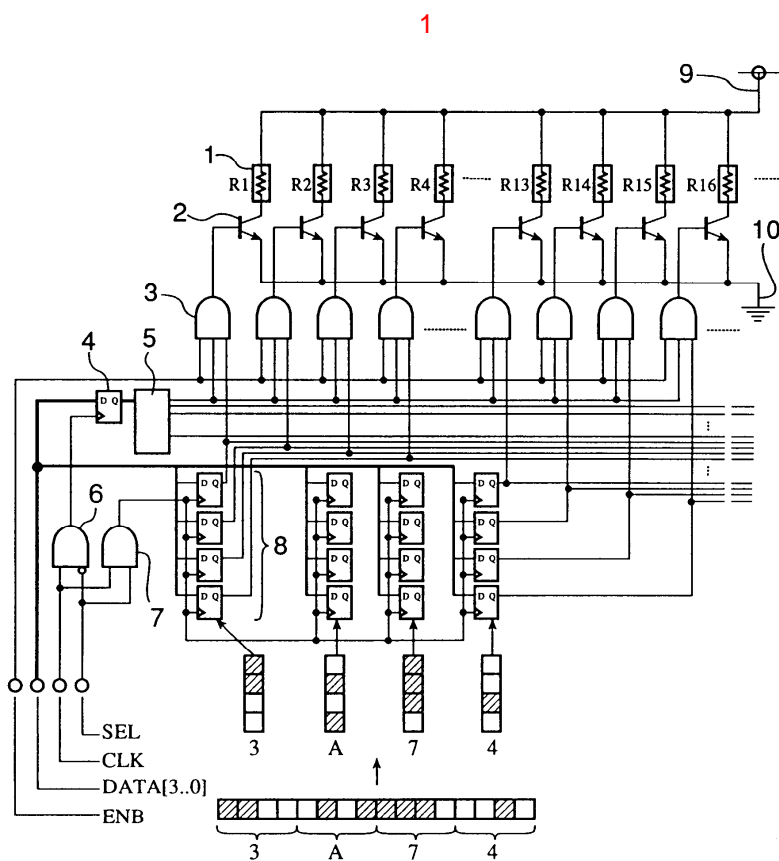
40

43.

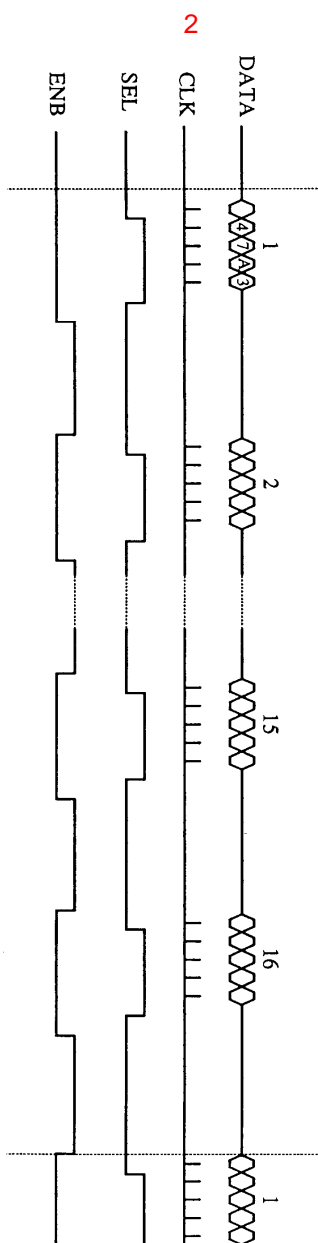
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44.

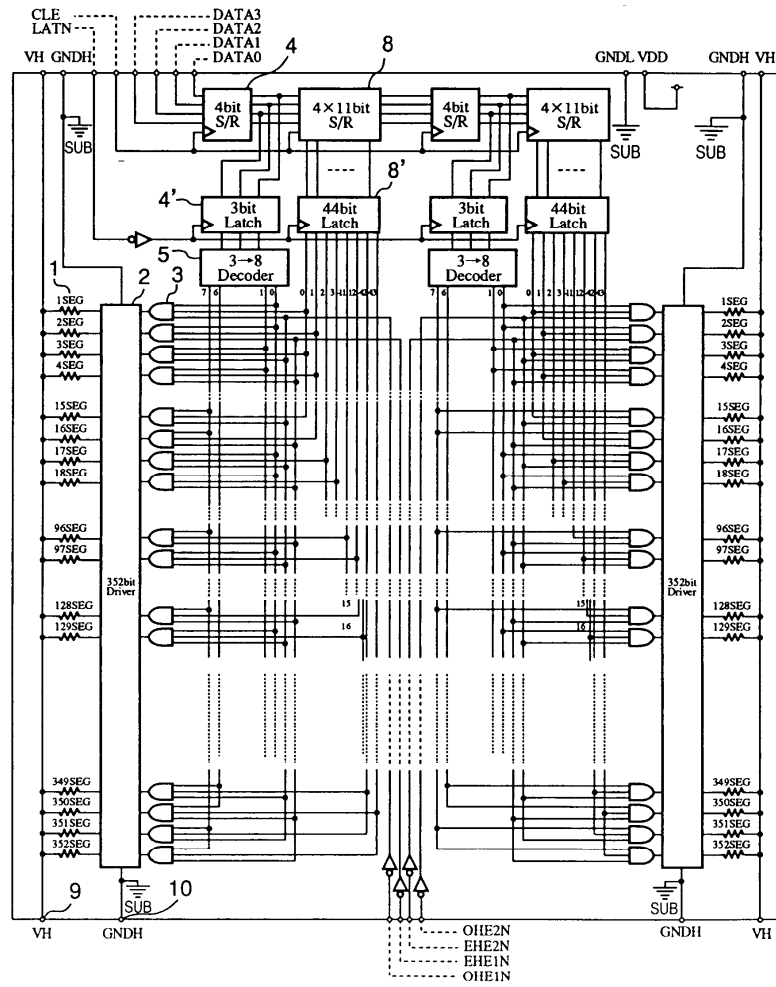
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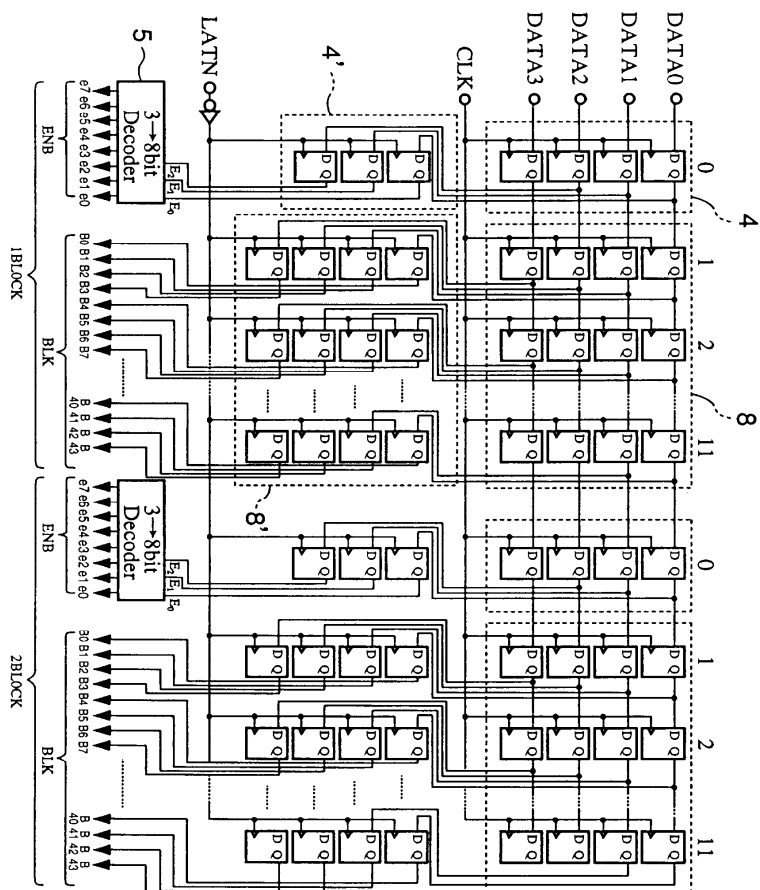


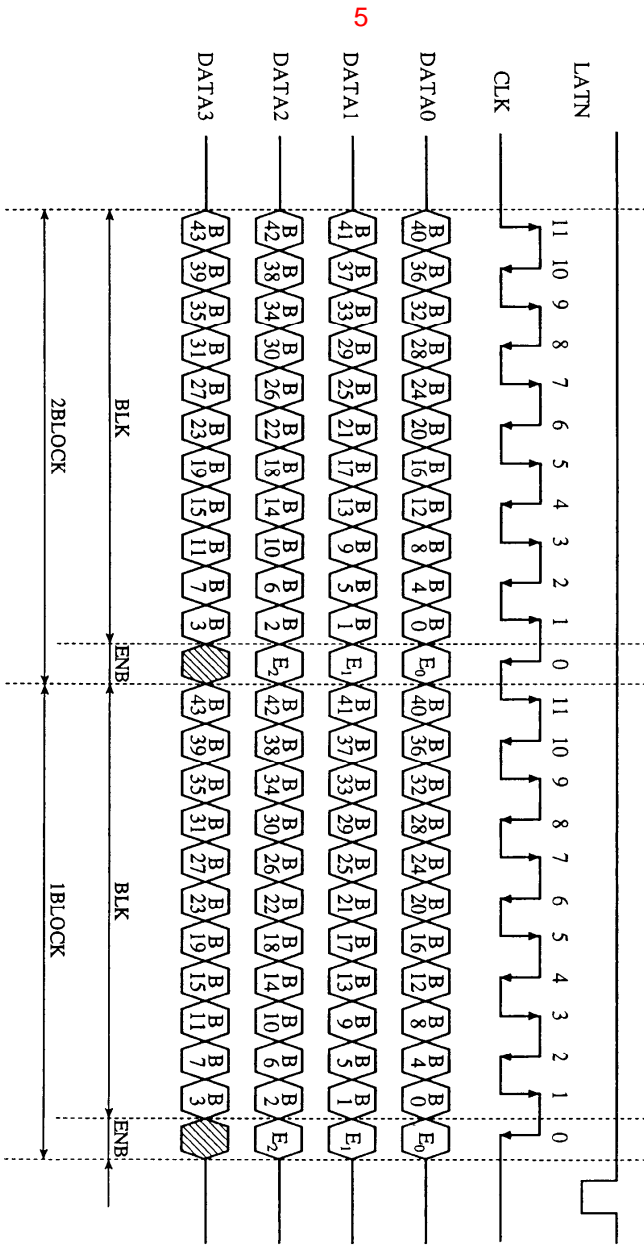


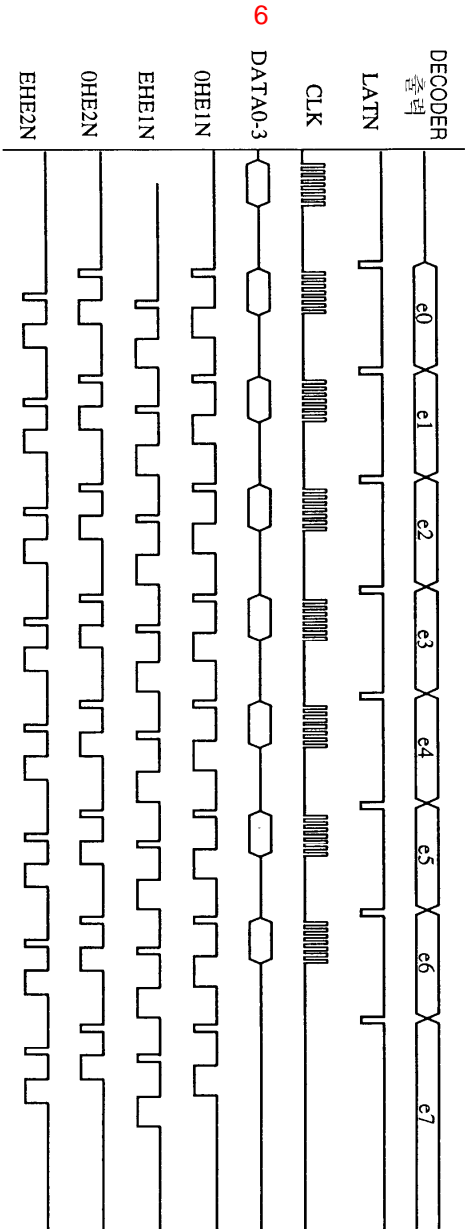
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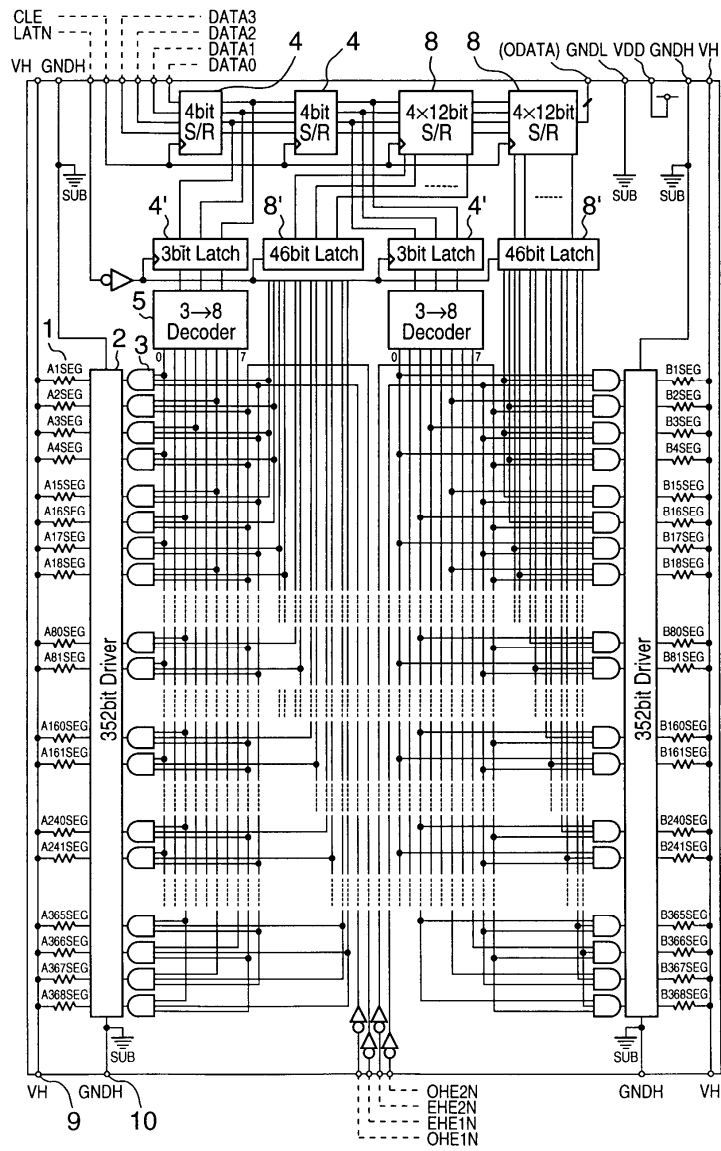
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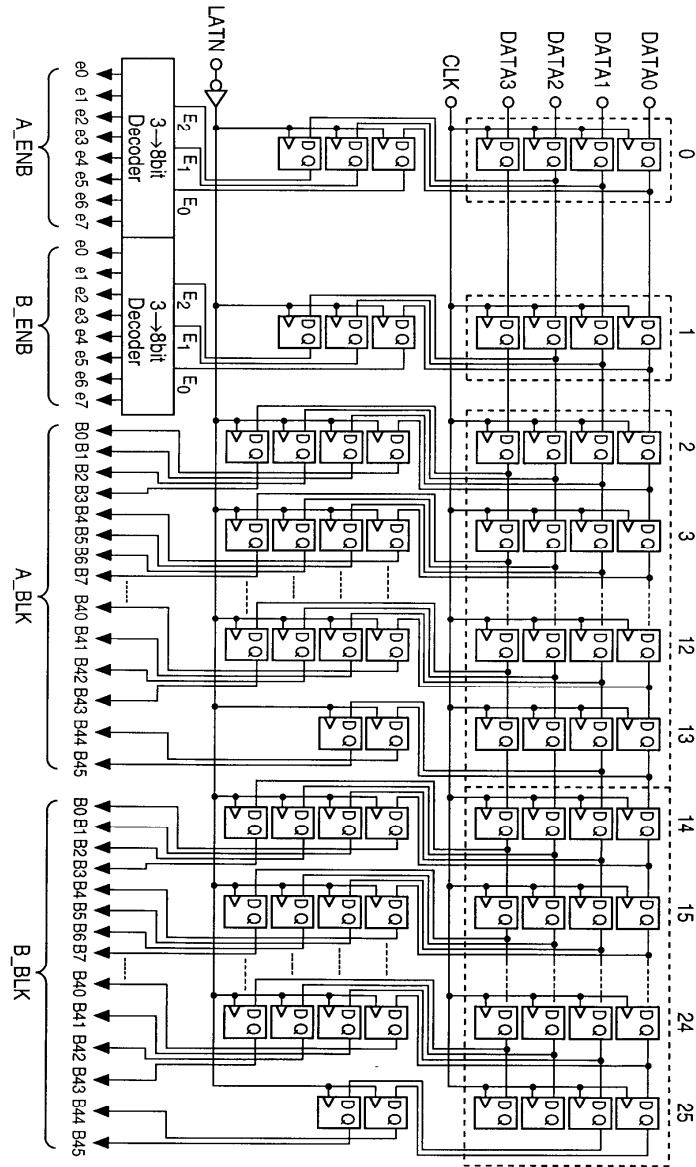


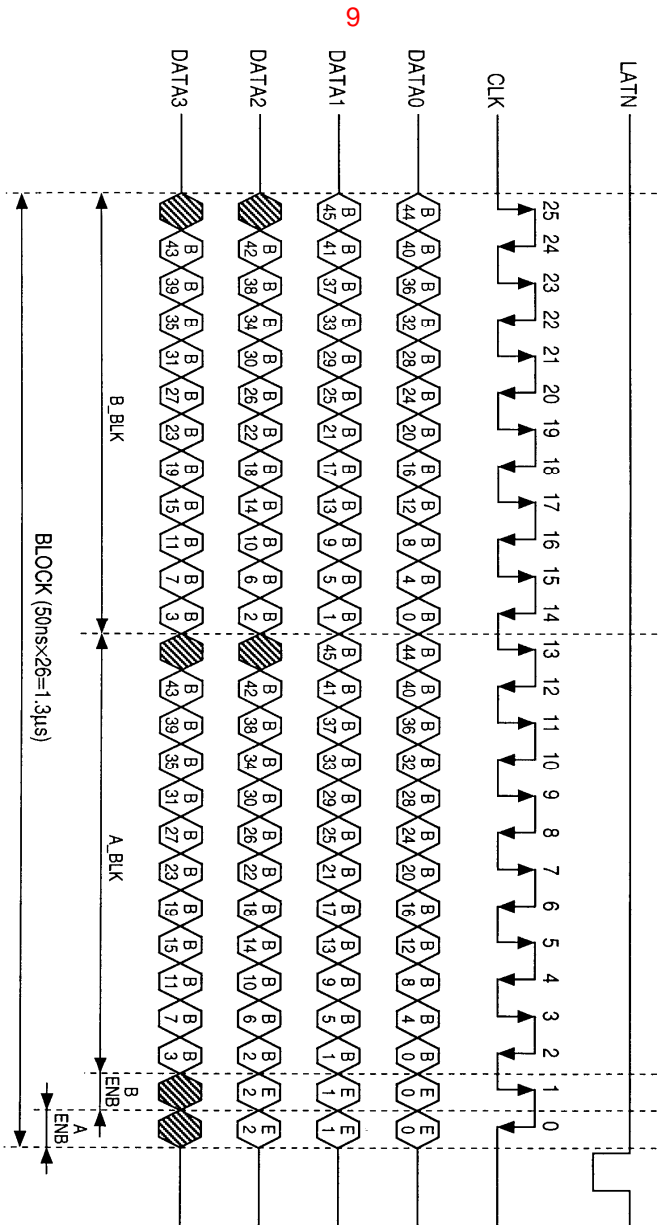


7



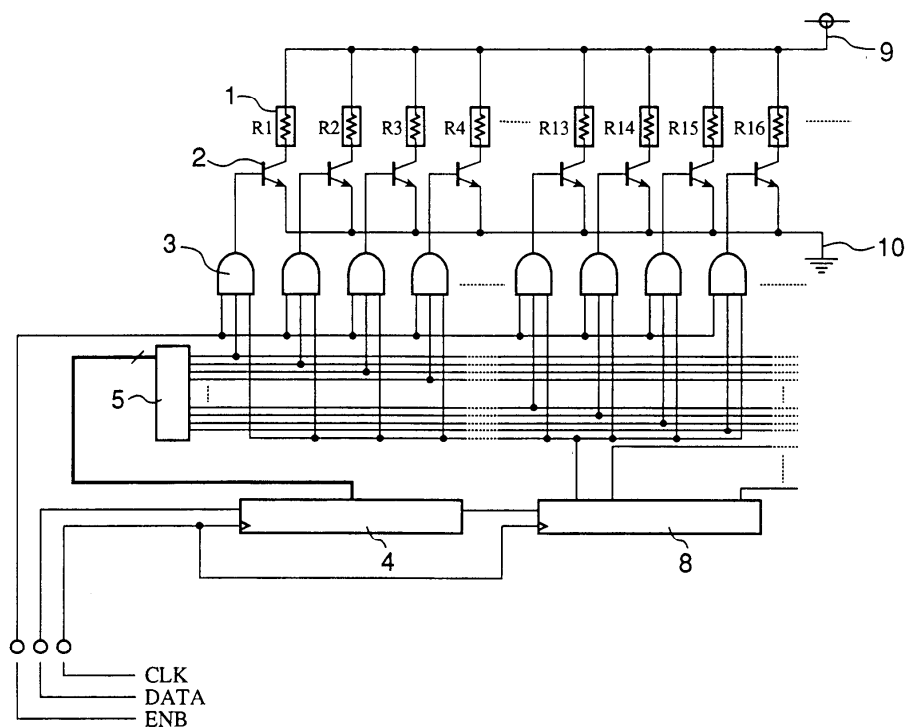
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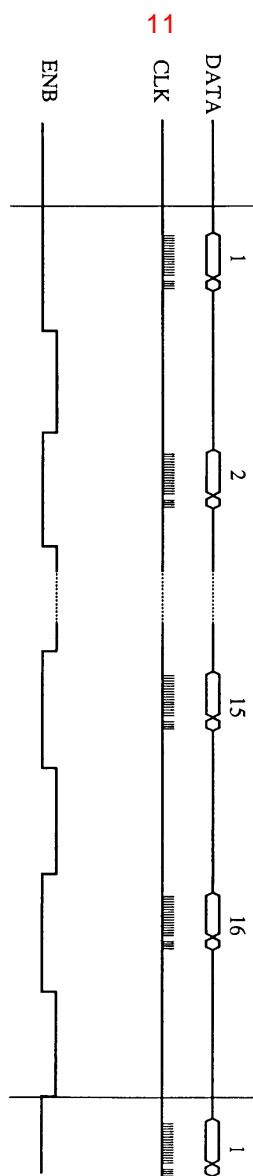




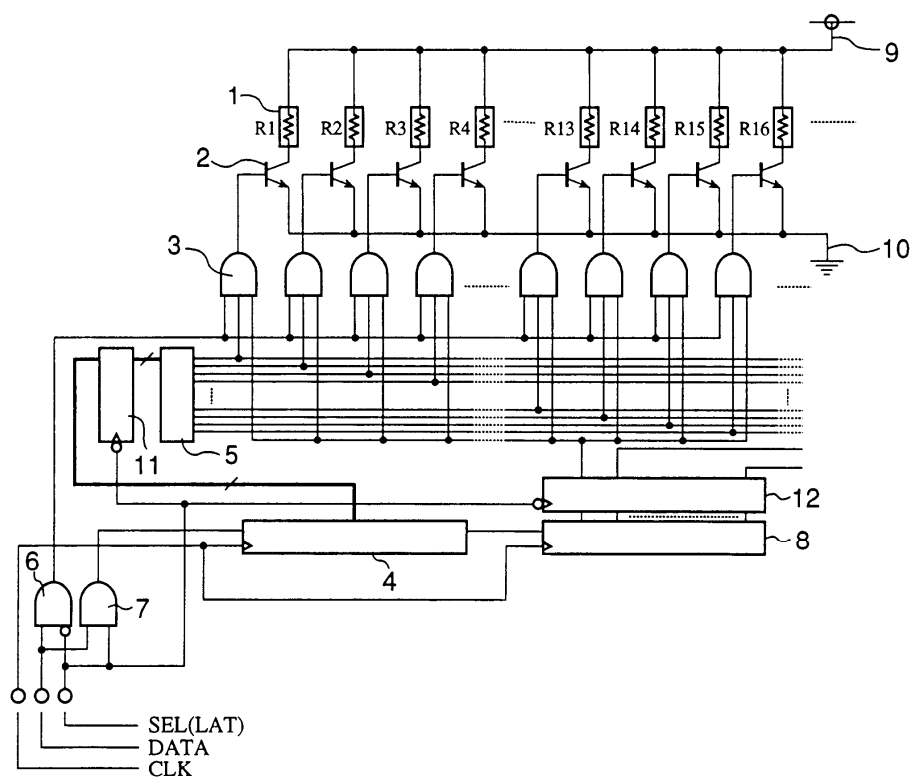


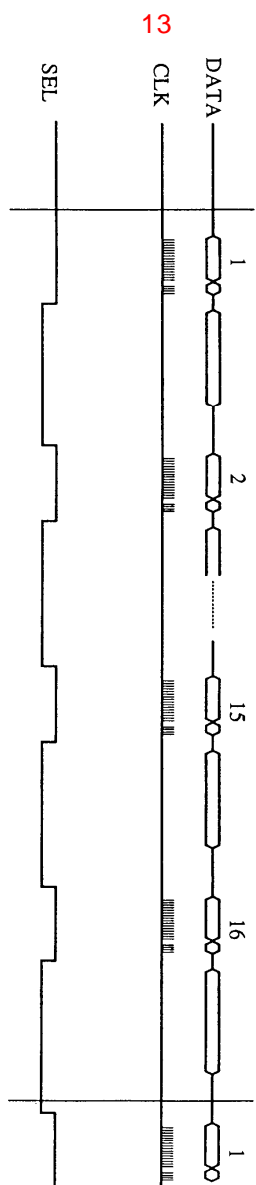
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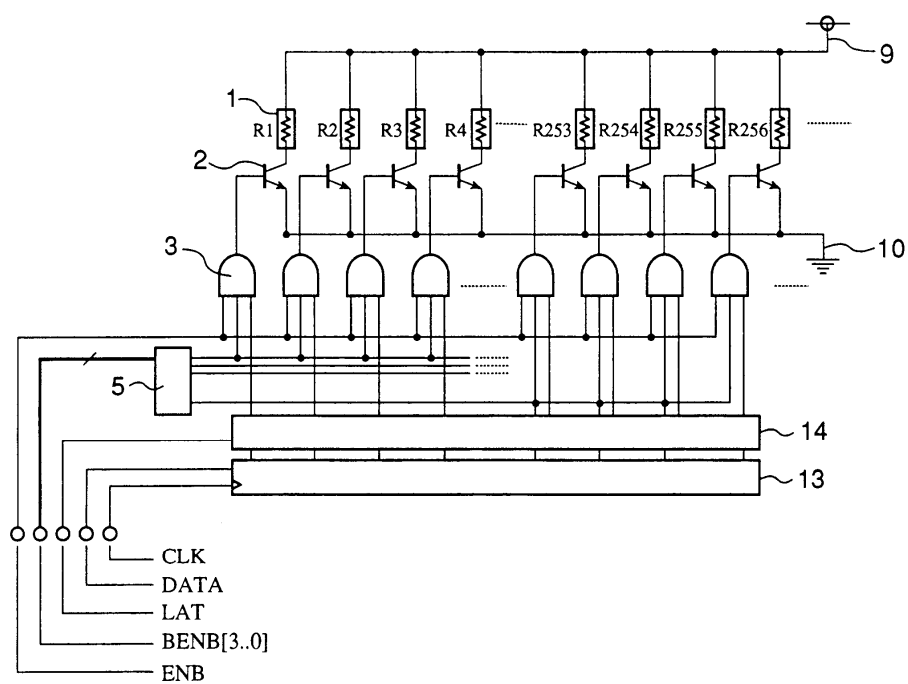


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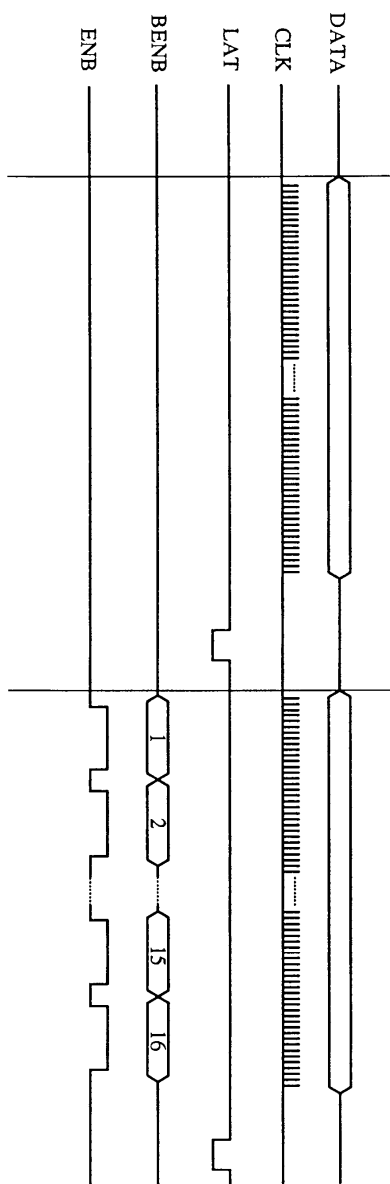




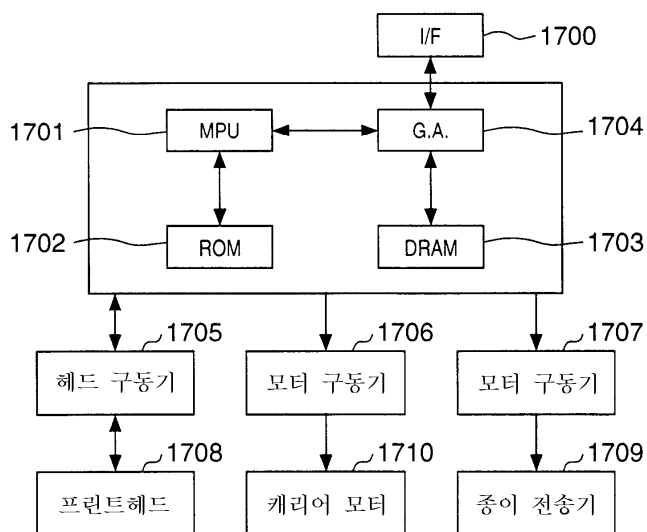
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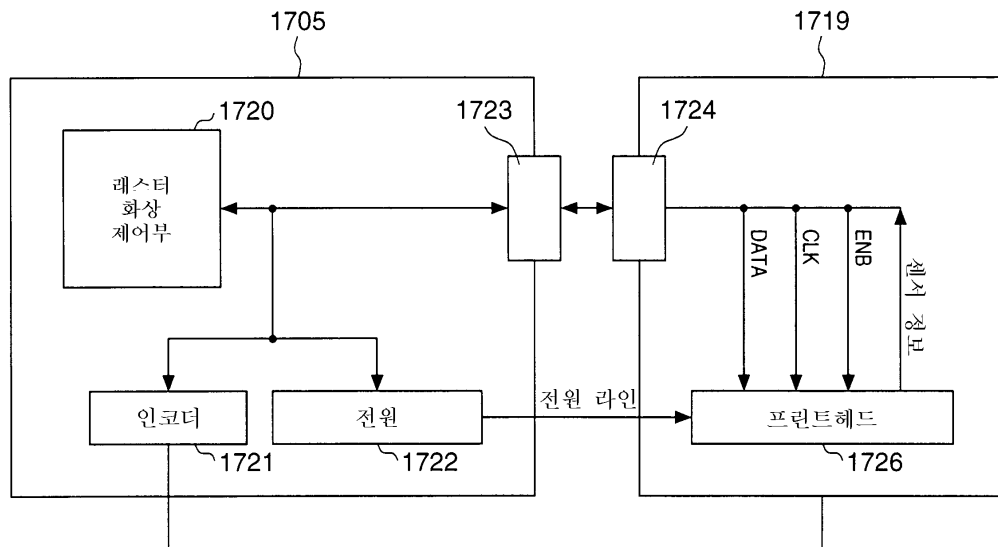
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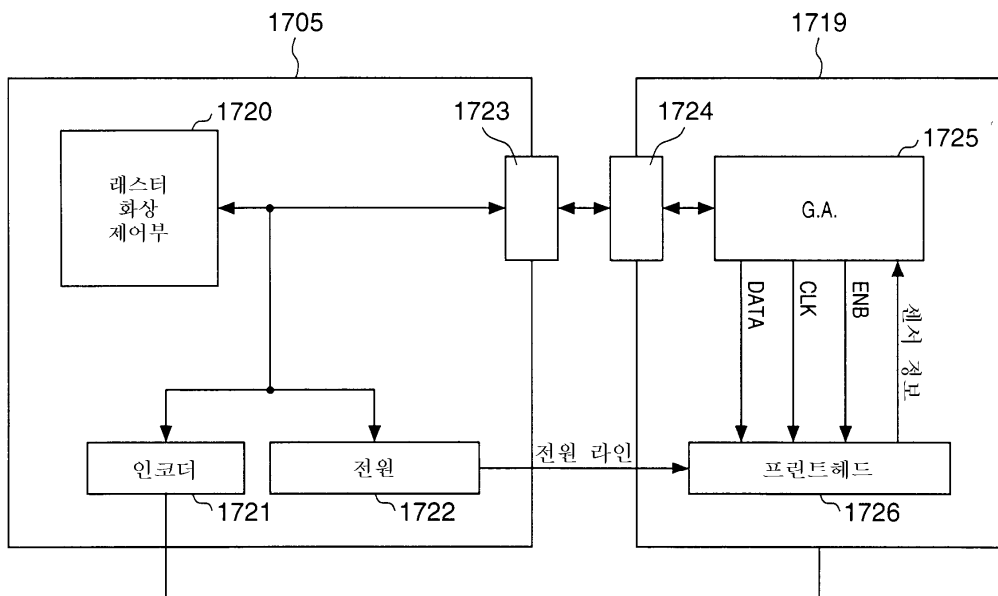
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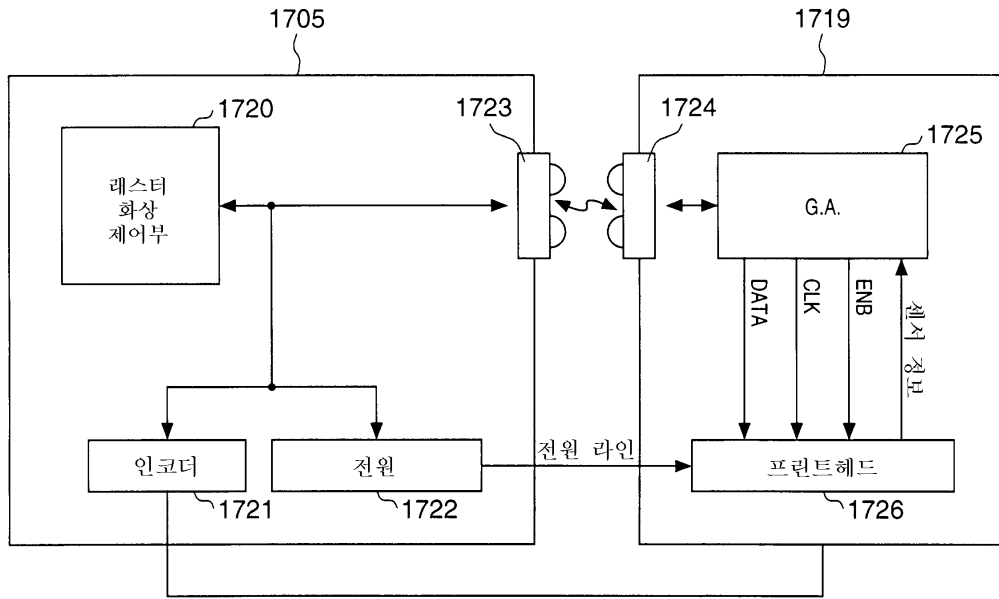
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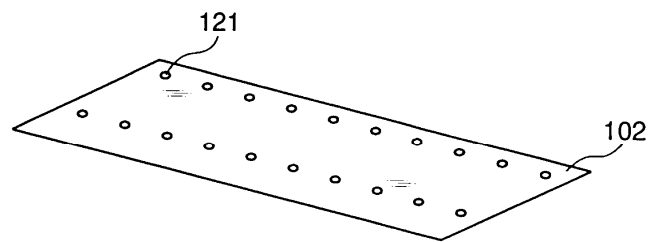
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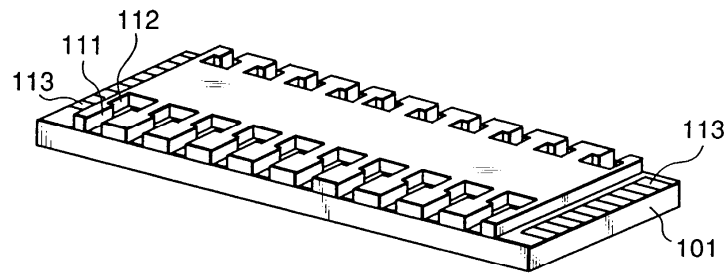
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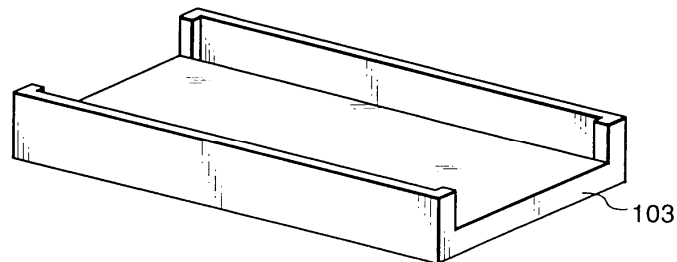
20a



20b



20c





21

