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2002 12 26  
10 - 0365758  
2002 12 10

(21) 10 - 2000 - 0044396  
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(65) 2002 - 0011018  
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(73) 136 - 1

(72) 308 - 107

7 702 - 1202

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(54)

lay) (Read) (Write) (tRCD : Row to Column De  
가 가 가 tRCD 가 ,  
가 . 가

3

, , tRCD, (Read), (Write)

1

2

3

tRCD

tRCD

(Read)

(Write)

1

가

(Write Latency)

가

(CAS)

(WL)

(BL, /BL)

(SA)

가

sae

(SA)

Yi

(Y - Gate)

가

Yi

(Y - Gate)

(BL, /BL)

(WL)

(CELL)

(DRAM)

Yi가

(Y - Gate)

가

(BL, /BL)

가

(BL, /BL)

Yi

(SA)

(WL)

(sae)가

(BL, /BL)

가

tRCD(Row to Column Delay)

Yi가

tRCD

AC

가

가

tRCD 가 Y이  
 tRCD가  
 tRCD )  
 ( 가 )가 가  
 2 tRCD  
 2 (Write Latency)가 2 (Burst Length)가 8 (CA  
 S Latency)가 3 tRCD WR가 tRCD ACT가 가  
 가 tRCD 가 가  
 tRCD  
 tRCD 가 가  
 tRCD(Row to Column Delay) (Read) (Write)  
 가  
 R) ; 1 (tRCDR) 2 (tRCDW) (tRCD  
 가 가  
 가  
 3 tRCD

3 (Write Latency)가 2 (Burst Length)가 8 (CA  
 S Latency)가 3 ACT가 tRCDR(tRCD for READ) RD가 tCL  
 가 .  
 , tRCDW(tRCD for WRITE) ACT가 tRCDR(tRCD for  
 READ) tWL 가 WR가 .  
 , ACT가 (WR)가  
 BL=8 WR가 tWL (Burst Length)  
 ( 1 Yi)가 가 가 ,  
 , 가 가 가 (Burst Length)가 8 8  
 가 가 tRCDW tRCDW , tRCD tRCDW, tWL BL tRCDR  
 가 가 tRCDW tRCDW 가 tRCDR  
 , tRCD tRCD  
 , 가  
 가 가  
 tRCD ,

(57)

1.

1

(tRCDR)  
;

1

(tRCDR)

2

(tRCDW)

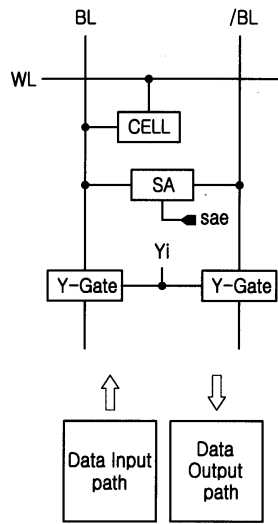
2.

1 ,

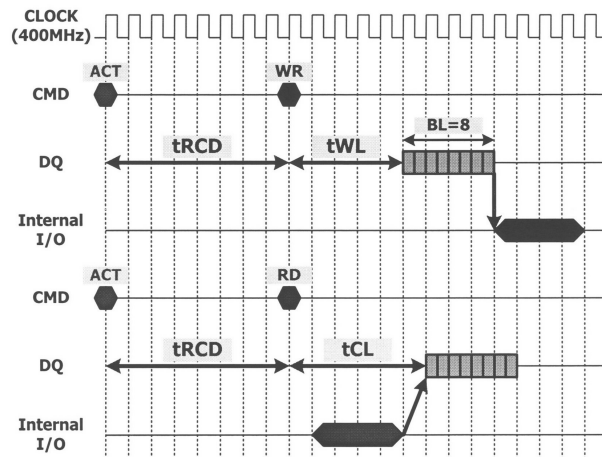
2 (tRCDW) ,

2 (tRCDW) 1  
 (tRCDR) .

1

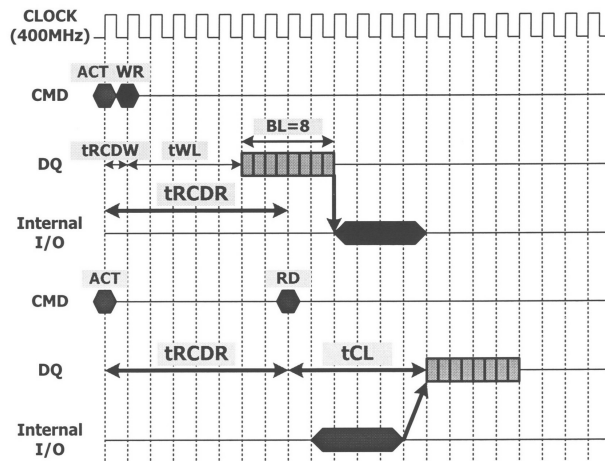


2



ACT : Row Activate, WR : WRITE, RD : READ, tRCDR : tRCD for READ  
tRCDW : tRCD for WRITE, tWL : Write Latency, tCL : Read(CAS) Latency  
 BL : Burst Length

3



ACT : Row Activate, WR : WRITE, RD : READ, tRCDR : tRCD for READ  
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