5.16. REGISTER --- IR (Instruction Register) and DR (Data Register)

SPLC780D contains two 8-bit registers: Instruction Register (IR) and Data Register (DR). Using combinations of the RS pin and the R/W pin selects the IR and DR, see below:

RS	R/W	Operation
0	0	IR write (Display clear, etc.)
0	1	Read busy flag (DB7) and Address Counter (DB0 - DB6)
1	0	DR write (DR to Display data RAM or Character generator RAM)
1	1	DR read (Display data RAM or Character generator RAM to DR)

The IR can be written by MPU, but it cannot be read by MPU.

5.17. Busy Flag (BF)

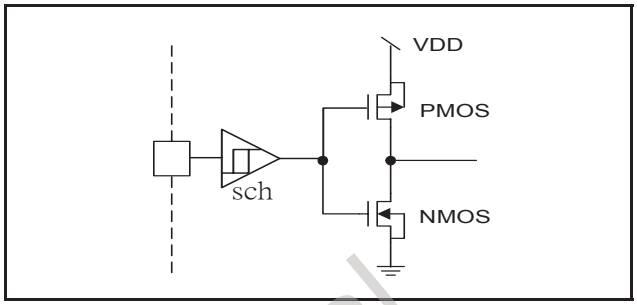
When RS = 0 and R/W = 1, the busy flag is output to DB7. As the busy flag =1, SPLC780D is in busy state and does not accept any instruction until the busy flag = 0.

5.18. Address Counter (AC)

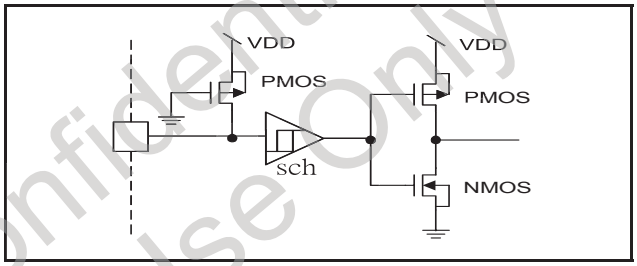
The Address Counter assigns addresses to Display Data RAM and Character Generator RAM. When an instruction for address is written in IR, the address information is sent from IR to AC. After writing to/reading from Display Data RAM or Character Generator RAM, AC is automatically incremented by one (or decremented by one). The contents of AC are output to DB0 - DB6 when RS = 0 and R/W = 1.

5.19. I/O Port Configuration

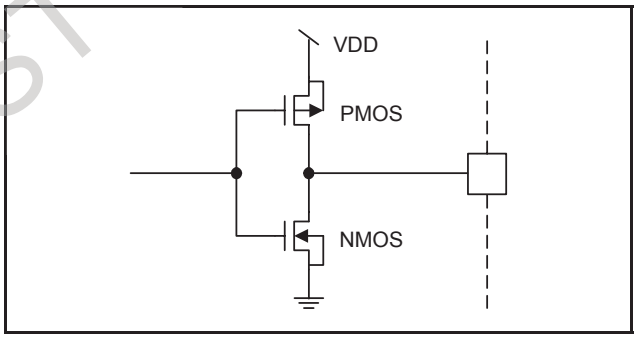
5.19.1. Input port: E



5.19.2. Input port: R/W, RS



5.19.3. Output port: CL1, CL2, M, D



5.19.4. Input / Output port: DB7 - DB0