

Table-1

S.No.	V_{DD}	V_{GS}	I_D
1	2 volt	2 volt	0 mA
2	3 volt	2.8 volt	0.2 mA
3	4 volt	3 volt	1 mA
4	5 volt	3.1 volt	2 mA
5	6 volt	3.1 volt	3 mA

Let as a switch

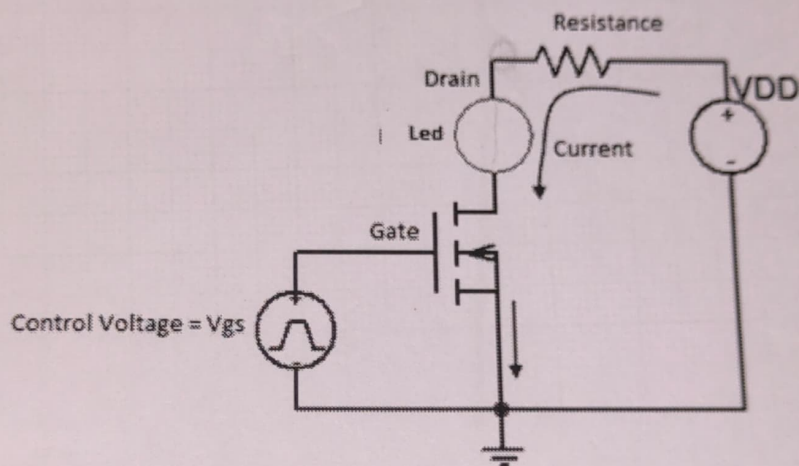


Figure 3. MOSFET as switching circuit.

1. Connect the circuit diagram as shown in figure 3.
2. When the control voltage exceeds the threshold voltage, the given Mosfet is work as short circuit. The current will flow in the circuit and Led glow.
3. When the control voltage is less the threshold voltage, the MOSFET is OFF (work as open circuit).
4. Keep V_{DD} as fixed supply voltage.

Table-2

S.No.		V_{DD} (fixed)	V_{GS}	V_{TN}	Led
1	$V_{GS} > V_{TN}$	5.0 volt	3.2 volt	2.8 volt	ON
2	$V_{GS} < V_{TN}$	5.0 volt	2.0 volt	2.8 volt	OFF

I_D v/s V_{GS} characteristics

I_D (mA)



6

5

4

3

2

1

0

1

2

3



V_{GS} (volt)

scale

x-axis = 1 unit = 0.5 volt

y-axis = 1 unit = 0.5 mA

saturation

$(V_{GS} < V_{th})$ $V_{GS} = V_{th}$ threshold voltage

$(V_{GS} > V_{th})$