

## Homework for Chapter 4

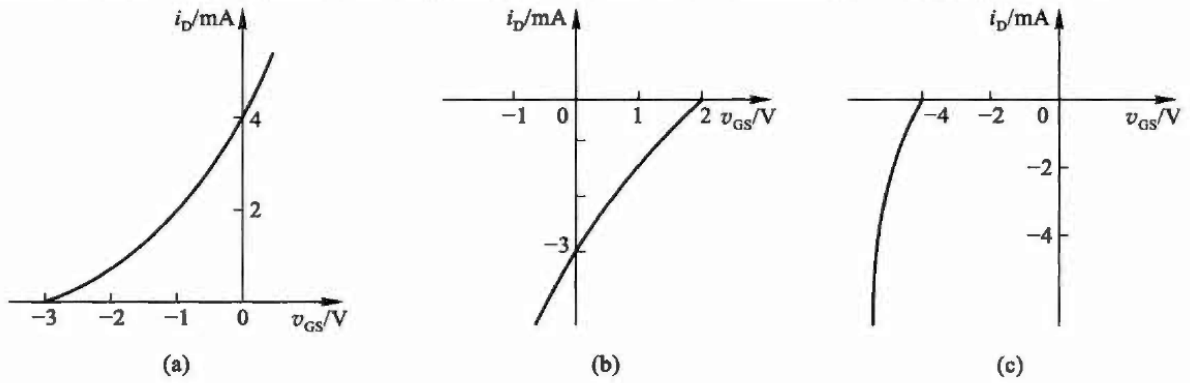
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### 4.1 金属-氧化物-半导体 (MOS) 场效应三极管

4.1.1 图题 4.1.1 所示为 MOSFET 的转移特性, 请分别说明各属于何种沟道。如果是增强型, 说明它的开启电压  $V_T$  等于多少; 若是耗尽型, 说明它的夹断电压  $V_P$  等于多少。(图中  $i_D$  的参考方向为流进漏极。)



图题 4.1.1

**Problem (a)** This is a N-type, Depletion-mode MOSFET, whereas  $V_P = -3$  V.

**Problem (b)** This is a P-type, Depletion-mode MOSFET, whereas  $V_P = 2$  V.

**Problem (c)** This is a P-type, Enhancement-mode MOSFET, whereas  $V_T = -4$  V.