

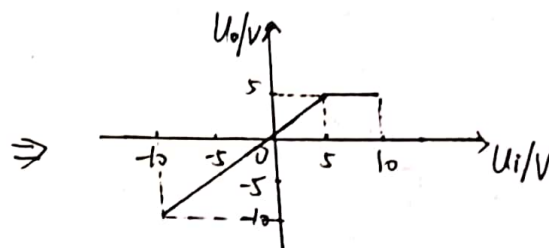
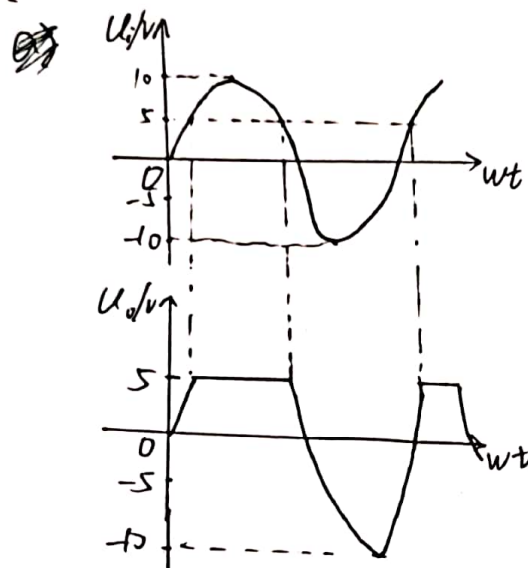
1-3

PN结内有电场导致单向导电性。当反向电压足够大时，反向电流增大，PN结失去单向导电性。温度升高，正向特性增强，反向特性下移，击穿特性不定。

1-6. ~~解~~ (1) $Z = \frac{10V - 0.7V}{5.1k\Omega} = 1.8mA$

$\Rightarrow T \uparrow, U_D \downarrow, I \uparrow$

1-8. 解 =



1-9. 串 =

① $U_1 = 6V + 9V = 15V$

② $U_2 = 0.7V + 0.7V = 1.4V$

③ $U_3 = 9V + 0.7V = 9.7V$

④ $U_4 = 6V + 0.7V = 6.7V$

并 = ① $U_1' = 6V$

② $U_2' = 0.7V$



1-10.

解: (1) $I_{Zmax} = \frac{P_Z}{U_Z} = 33 \text{ mA}$

$$U_o = \frac{R_L}{R + R_L} U_i = 13.3 \text{ V}$$

无法稳压

(2) $U_o = \frac{R_L}{R + R_L} U_i = 3.3 \text{ V}$

无法稳压

(3) $I_Z = \frac{U_i - U_Z}{R} = 28 \text{ mA}$

$$10 \text{ mA} < 28 \text{ mA} < 33 \text{ mA}$$

可以正常工作

(4) $I_{Zmax} = \frac{7 \text{ V} - 6 \text{ V}}{50 \Omega} = 2 \text{ mA}$

$$2 \text{ mA} < 10 \text{ mA}$$

无法稳压

