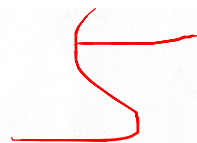


模电 ch1

张婉璐

1120193293

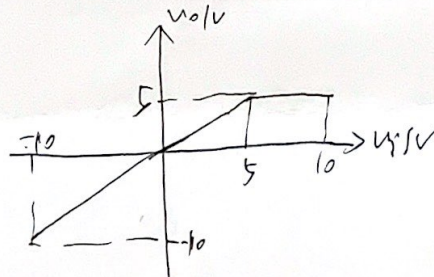
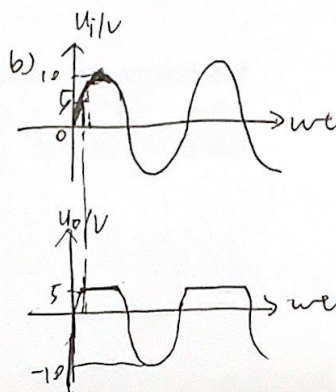
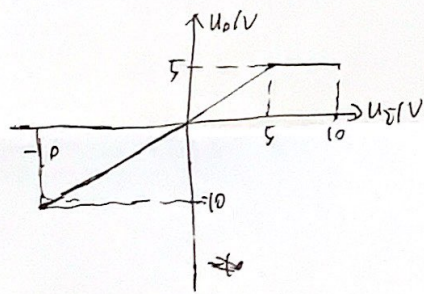
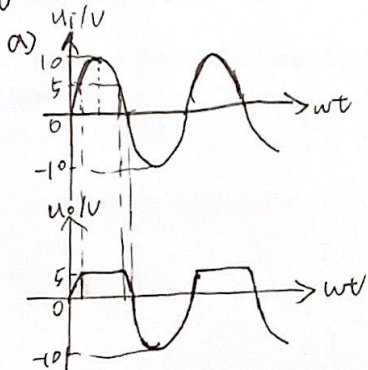
06011908至1月



1.0. 1. $I \approx \frac{10V - 0.7V}{5.1k\Omega}$
 $\approx 1.82mA$

2. 温度升高时, V_D 减小, I 增大

1.8



1-9 串联: 四种 15V, 6.7V, 9.7V, 1.4V

并联: 两种 6V, 0.7V

1-10

1. 假设 $V_0 = V_Z = 6V$

则 $I_0 = \frac{V_Z}{R_L} = \frac{6V}{1k\Omega} = 6mA$

$I = \frac{V_1 - V_0}{R} = \frac{20V - 6V}{500\Omega} = 28mA$

$I_Z = I - I_0 = 22mA$

$I_{Zmax} = \frac{P_{Zm}}{V_Z} = \frac{200mW}{6V} \approx 33mA$

$10mA < 22mA < 33mA$

\therefore 电路工作 $\therefore V_0 = 6V$

2. $V_0 = \frac{R_L}{R_L + R} V_1$
 $= \frac{100\Omega}{100\Omega + 500\Omega} \times 20V$
 $= 3.3V$

稳压管截止

3. $I_Z = \frac{V_1 - V_Z}{R}$
 $= \frac{20V - 6V}{500\Omega} = 28mA$

$10mA < 28mA < 33mA$

稳压管工作

正常 $I_1 \downarrow V_0 = V_Z = 6V$

4. $I_{Zmax} = \frac{V_1 - V_Z}{R}$
 $= \frac{7V - 6V}{500\Omega} = 2mA < 10mA$
 稳压管无法正常工作