

## 作业纸

课程名称: 模电

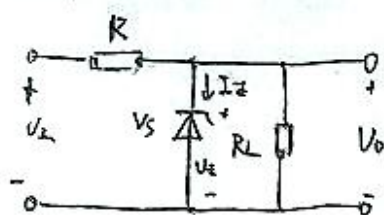
班级: 1928

教学班级: 1908

姓名: 黄睿

学号: 1120932914 第 页

10-10:



$$V_Z = (5 \sim 6.5) V \quad V_Z = 5 V$$

$$I_{Z0} = 10 mA$$

$$I_{Zmax} = 38 mA$$

$$V_{Z0} = 5 V$$

$$V_{Z0} = \frac{2.8 + 1.8 + 1.8}{1.5} \times (2.8V + 2V) = 9.0V$$

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1. 当  $R=0$  时候.

$$V_0 = V_Z \quad \text{当 } R_L \text{ 变化, } V_0 = V_Z$$

该稳压管很容易烧毁, 而且稳压效果比较差。

$$2. V_0 = 6V \quad I_{0max} = 5mA$$

$$V_{Imax} = 1.2 \times 1.5 = 1.8V$$

$$V_{imin} = 1.2 \times 0.9 = 1.08V$$

$$\frac{V_{Imax} - V_0}{R} < I_{Zmax}$$

$$\frac{V_{imin} - V_0}{R} - I_{0max} > I_Z$$

$$360 < R < 680$$

10-11:

$$1. V_2 = \frac{V_1}{1.2} = 20V$$

$$2. V_0 \cdot \frac{R_4}{R_4 + R_{op} + R_3} = 6$$

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$$3. V_0 \text{ 为 } (9 \sim 18V)$$

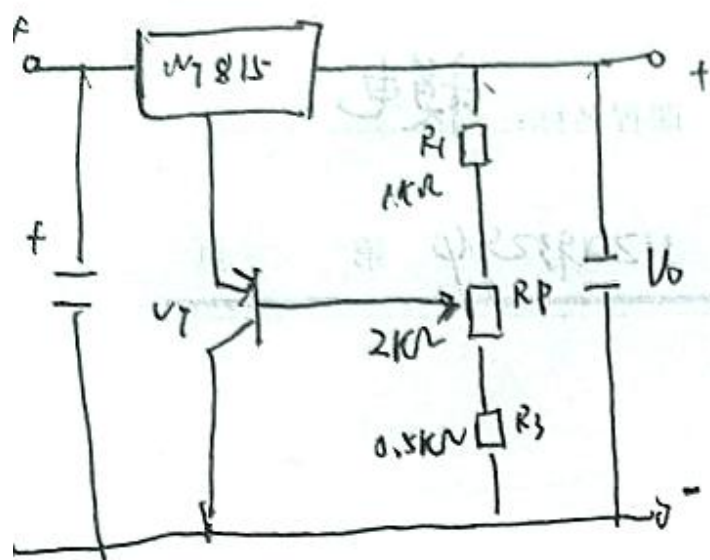
$$3. V = 6 \cdot \frac{R_4 + R_{op} + R_3}{R_4} = 24V$$

$$\text{由于 } V_1 = 24V \text{ 且 } V_{ES} = 2V$$

$$\therefore V = 22V$$

联系方式: \_\_\_\_\_

10-19:



$$U_{o(max)} = (15 + V_{BE}) \times \frac{R_1 + R_P + R_3}{R_1} = 53.2V$$

$$U_{o(min)} = (15 + V_{BE}) \times \frac{R_1 + R_P + R_3}{R_1 + R_P} = 17.7V$$

∴ 范围: (17.7 ~ 53.2) V