

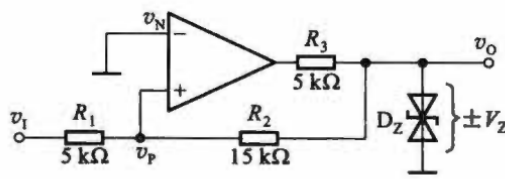
Homework for Chapter 9

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10.8.5 设运放为理想器件,试求图题 10.8.5 所示电压比较器的门限电压,并画出它的传输特性(图中 $V_z = 9\text{ V}$)。



图题 10.8.5

1 Problem 1

Adjust the value of R_1 and R_3 until:

$$V_{C2} = \frac{V_{CC}}{2} = 6\text{ V}$$

2 Problem 2

Adjust the value of R_2 should solve the Crossover Distortion issue.

3 Problem 3

When D_1 , D_2 or R_2 is open-circuited

$$P_{T1} = P_{T2} = \beta I_B V_{CE} = \beta \cdot \frac{V_{CC} - 2|V_{BE}|}{R_1 + R_3} \cdot \frac{V_{CC}}{2} = 1156\text{ mW} > P_{CM}$$

Either T_1 or T_2 will be damaged.