

$$V_t = 5.6 \text{ V}$$

$$I_z = 3.2 \text{ mA} \quad .0032 \text{ A}$$

$$r_z = 10 \Omega$$

$$5.57 \text{ V}$$

$$V_z = V_{z0} + I_z r_z \quad \text{or} \quad V_{z0} = V_z - I_z r_z$$

$$\Delta V_o = \frac{r_z}{R + r_z} (\Delta V_s)$$