

Curto Circuito:

$$|Z_t| = \frac{V_{cc}}{I_{cc}} = \frac{9.9}{4.5}$$

$$|Z_t| = 2.2\Omega$$

$$R_t = \frac{P_{cc}}{I_{cc}^2} = \frac{9.9}{4.5}$$

$$R_t = 2.07\Omega$$

$$X_t = \sqrt{|Z_t|^2 - R_t^2} = 0.745\Omega$$

Circuito Aberto:

$$R'_m = \frac{V_{oc}^2}{P_{oc}}$$

$$|Z_{oc}|' = \frac{V_{oc}}{I_{oc}}$$

$$X'_m = \left(\sqrt{\frac{1}{|Z_{oc}|'^2} - \frac{1}{R_m'^2}} \right)^{-1}$$

$$X_m = N^2 X'_m$$

$$R_m = N^2 R'_m$$