

18.)  $R_b = 5\Omega$   $R_t = 10\Omega$  a.)  $R_{t2} = ?$   $P_{t2} = P_{t1}$

b.)  $\frac{P_{t1}}{P_{\dot{0}1}} (\%) = ?$   $\frac{P_{t2}}{P_{\dot{0}2}} (\%) = ?$  c.)  $P_{t \max}$   
 $R_t = ?$

$$P = I^2 R$$

$$R_e = \sum R_i \text{ soros}$$

$$I = \frac{U}{R}$$

a.)  $R_e = R_b + R_t$

$$I = \frac{\mathcal{E}}{R_e} = \frac{\mathcal{E}}{R_b + R_t}$$

$$P_t = I^2 R_t = \frac{\mathcal{E}^2}{(R_b + R_t)^2} R_t = \frac{\mathcal{E}^2}{(5\Omega + R_t)^2} R_t \Rightarrow \underline{\underline{R_{t1,2}}}$$

b.)  $\frac{P_t}{P_{\dot{0}}} = \frac{\frac{\mathcal{E}^2 R_t}{(R_b + R_t)^2}}{\frac{\mathcal{E}^2 (R_b + R_t)}{(R_b + R_t)^2}} = \dots < \begin{matrix} \% \\ \% \end{matrix}$

c.)  $P_t = \frac{\mathcal{E}^2 R_t}{(R_b + R_t)^2} = \frac{\mathcal{E}^2 R_t}{(5\Omega + R_t)^2} \rightarrow \text{szélsőérték} \frac{dP_t}{dR_t} = 0$

$$\underline{\underline{R_t}}$$