

Chapitre 11

32 Puissance dans un circuit

1. $P_f = U.I = 5,0 \times 0,25 = 1,25 \text{ W.}$

2. $P_{\text{joule}} = R.I^2 = 2 \times 0,25^2 = 0,125 \text{ W.}$

3. $P_u = P_f - P_{\text{joule}} = 1,25 - 0,125 = 1,125 \text{ W.}$

4.

$$\rho = \frac{P_u}{P_f} = \frac{1,125}{1,25} = 0,9 = 90\%$$

5. $P_f = U.I = 5,0 \times 0,5 = 2,5 \text{ W.}$

$$P_{\text{joule}} = R.I^2 = 2 \times 0,5^2 = 0,5 \text{ W.}$$

$$P_u = P_f - P_{\text{joule}} = 2,5 - 0,5 = 2,0 \text{ W.}$$

$$\rho = \frac{P_u}{P_f} = \frac{2,0}{2,5} = 0,8 = 80\%$$