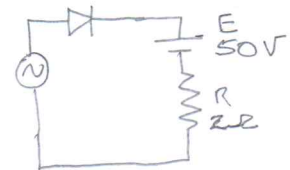


$$V_s = \sqrt{2} \cdot 230 \text{ sen}(100\pi t)$$

$$325,27$$

$$R = 2 \Omega$$

$$E = 50 \text{ V}$$



<< circuito puramente Resistivo >>

a) o Diodo conduz quando $V_s \geq E$

$$50 = 230 \sqrt{2} \text{ sen}(\theta) \pi t$$

$$\theta = 0,154330 \text{ rad } (8,8^\circ)$$

$$c) \dot{I}_{\text{medio}} = \frac{1}{\pi} \int_{\theta_i}^{\theta_f} \frac{V_s(\theta) - E}{R} d\theta ; \theta_i = 0,154330, \theta_f = \pi - 0,154330$$

$$= \frac{1}{2\pi} \int_{0,154330}^{\pi - 0,154330} \frac{\sqrt{2} \cdot 230 \text{ sen}(\theta) - 50}{2} d\theta$$

$$= 39,881 \text{ [A]}$$

$$I_{\text{rms}} = \sqrt{\frac{1}{\pi} \int_{\theta_i}^{\theta_f} \left(\frac{V_s(\theta) - E}{R} \right)^2 d\theta} = 65,775 \text{ [A]}$$

$$d) P = \frac{1}{\pi} \int_{\theta_i}^{\theta_f} V_o(\theta) \times I_o(\theta) d\theta$$

$$= 2 \times 35,775$$

$$= 10646 \text{ [W]}$$