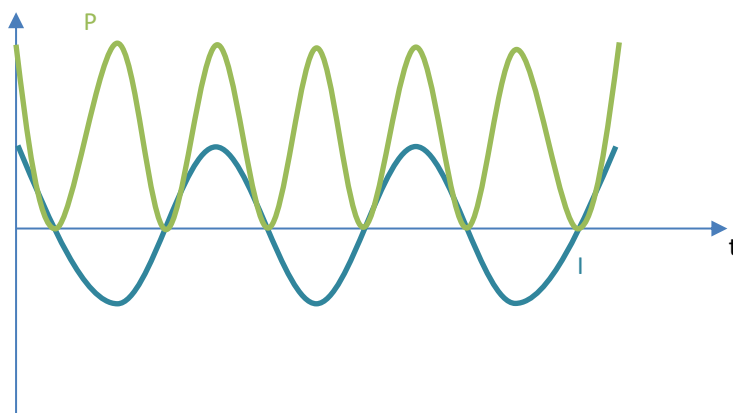


CONCEPT: POWER IN AC CIRCUITS

- In AC circuits, the only element to have an average power not equal to zero is the _____
 - Whatever energy enters a(n) _____ / _____ equals the energy that leaves
- The MAXIMUM power of a resistor is $P_{MAX} = \underline{\hspace{2cm}}$
- Since the power of a resistor is $p(t) = i(t)^2 R$, we have the following graphs of current and power through a resistor:



- The AVERAGE POWER emitted by an AC circuit is

$$P_{av} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

EXAMPLE: An AC source operating at a maximum voltage of 120 V is connected to a $10\ \Omega$ resistor. What is the average power emitted by this circuit? Is this equivalent to the RMS power, which would be $i_{RMS}^2 R$?