**POWERSYS**

**ELECTRICAL ENGINEERING**

# UNCONTROLLED RECTIFICATION (FORM)

## 1. Single phase rectification:

We show below the values of the average output voltages of rectification circuits.
We will retain the hypothesis of operation in the **linear domain.**
The input voltage is sinusoidal: $v(t) = V_{max}\sin\omega t$.

### Single Half-Wave Rectification



$$V_{Rcmoy} = \frac{V_{max}}{\pi}$$
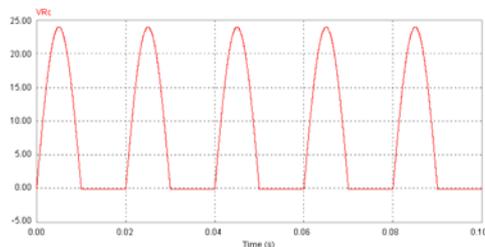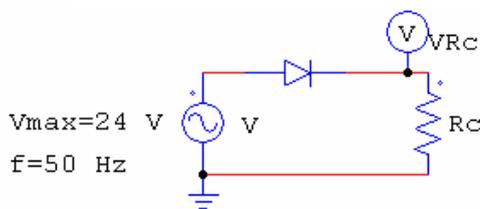
### Double Half-Wave Rectification
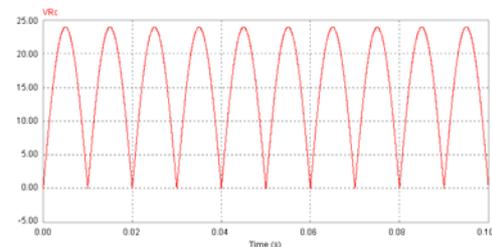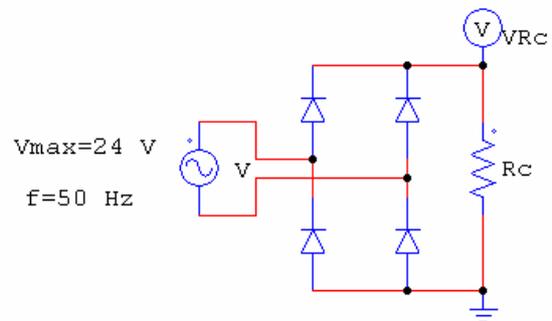


$$V_{Rcmoy} = \frac{2V_{max}}{\pi}$$

## 2. Three phase rectification:

We retain the same hypotheses as in the previous example.

$$V_{Rcmoy} = \frac{3\sqrt{3}\,V_{max}}{2\pi}$$

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