Full wave rectifier

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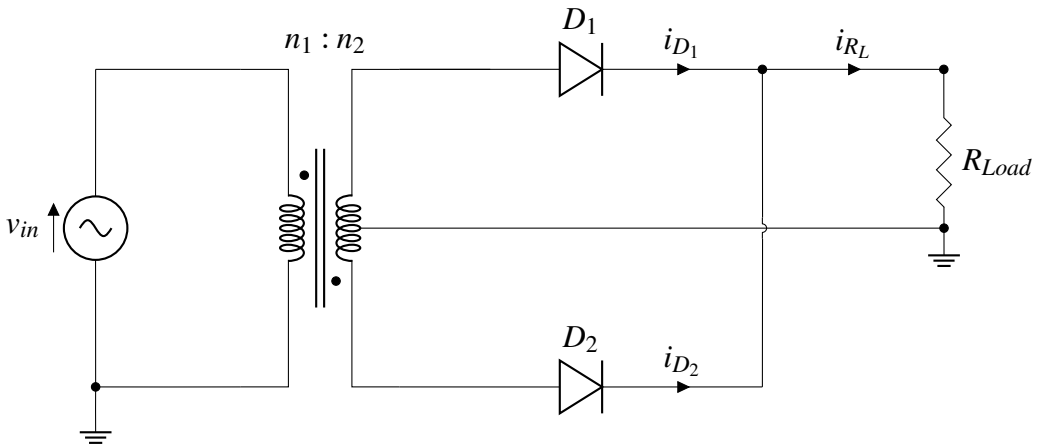

Figure 1: Full-wave rectifier

The Figure 1 is the circuit of a full wave rectifier with 2 diodes where:

$$V_{DC} = \frac{2}{T}\int_0^{\frac{T}{2}} V_m \sin(\omega t)dt = \frac{2V_m}{\pi} = 0.636V_m$$

$$V_{RMS} = \left[\frac{2}{T}\int_0^{\frac{T}{2}} (V_m \sin(\omega t))^2 dt\right]^{\frac{1}{2}} = \frac{V_m}{\sqrt{2}} = 0.707V_m$$