

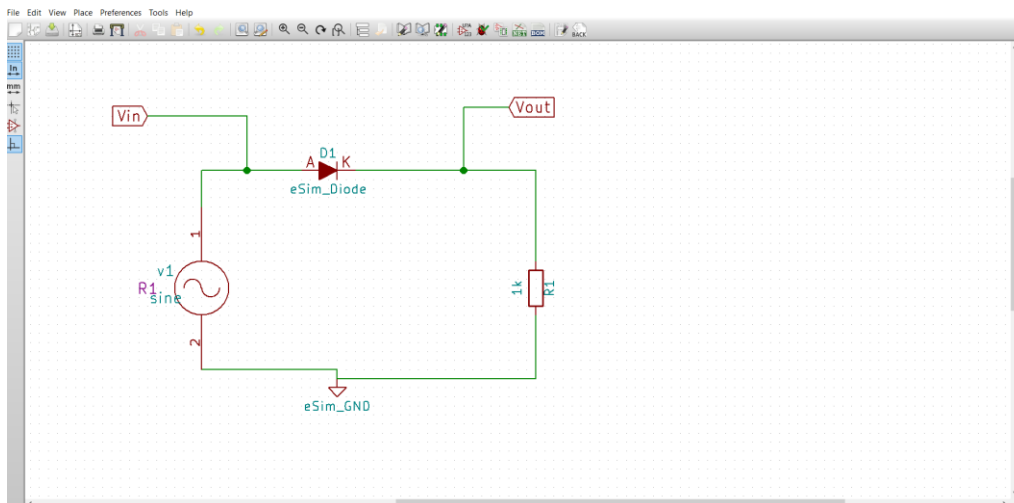
HALF WAVE RECTIFIER FOR POSITIVE CYCLE

THEORY:

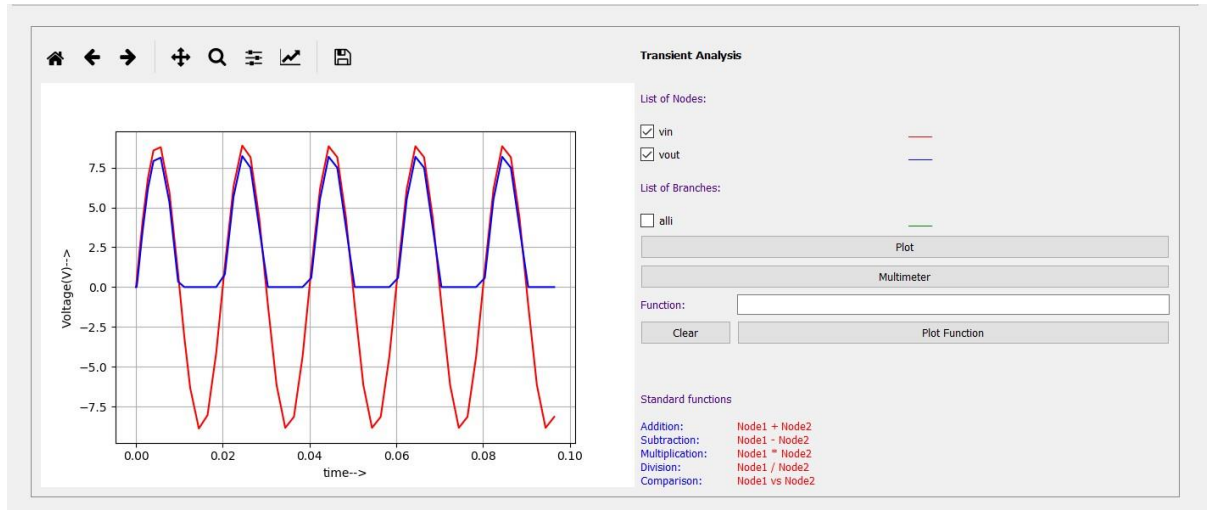
A rectifier is a device that converts alternating current (AC) to direct current (DC). It is done by using a diode or a group of diodes. Half wave rectifiers use one diode. A half wave rectifier consists of a diode and a load resistor.

For example, if a sinusoidal wave is passed as an input (V_{in}) then the output (V_{out}) will show the output which is the negative part of the sinusoidal wave will be excluded and it will just show the output for the positive cycle (waveform). In the python plot we can see that V_{in} (sinusoidal wave) red colour waveform and the V_{out} is denoted by blue colour waveform (positive cycle).

SCHEMATIC DIAGRAM:



Python simulation plot:



CONCLUSION :

Thus, we have studied the output waveform of half wave rectifier for positive half cycle using eSim and we get the appropriate waveform.

REFERENCES:

<https://www.tutorialspoint.com/half-wave-rectifier>

