

DESIGN OF CLIPPER CIRCUIT

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INTRODUCTION:

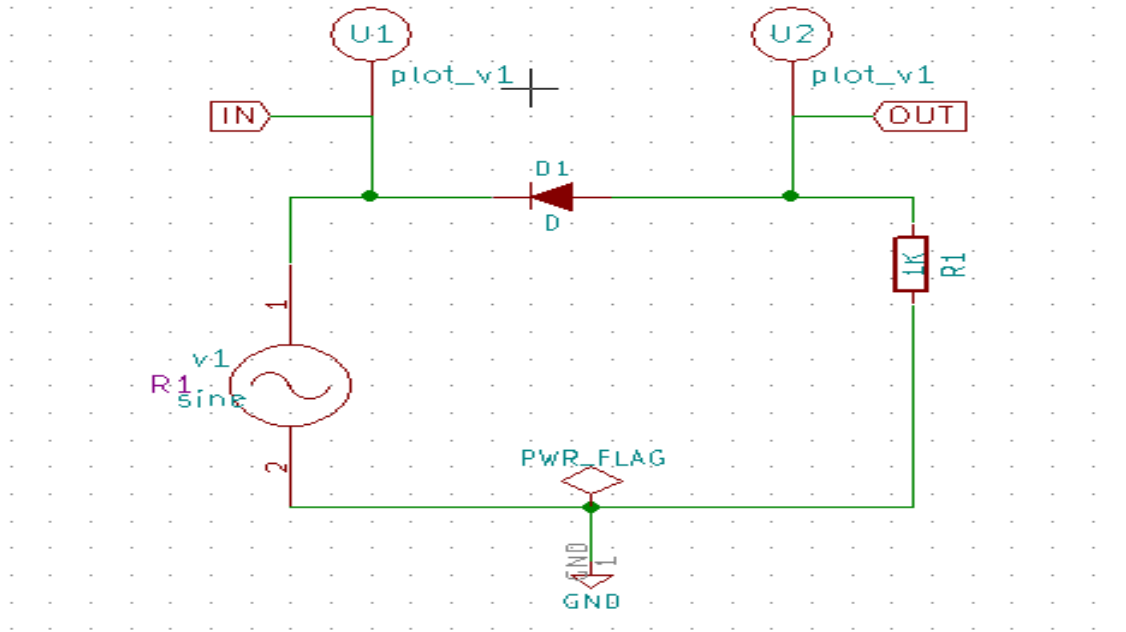
The diode clipper also known as a diode limiter, is a wave shaping circuit that takes an input waveform and clips or cuts of its top half, bottom half or both halves together.

This clipping of the input signal produces an output waveform that resembles flattened version of the input.

CIRCUIT ANALYSIS:

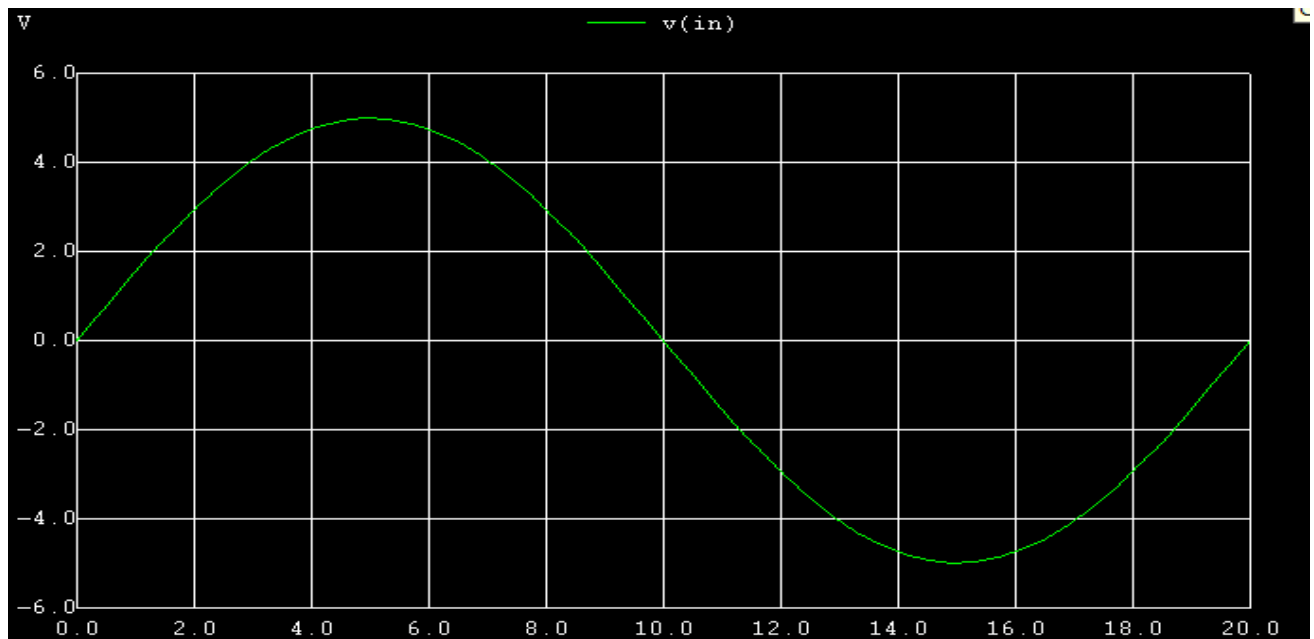
A clipper circuit in which the diode is connected in series to the input signal and that attenuates the negative portions of the waveform is, termed as negative series clipper. The diode is forward biased during the negative half cycle of the sinusoidal waveform and limits are clips it to -0.7volts while allowing the positive half cycle to pass unaltered when reverse biased. As the diode limits the negative half cycle of the input voltage it is therefore called negative clipper circuit.

RTL SCHEMATIC USING ESIM SOFTWARE:

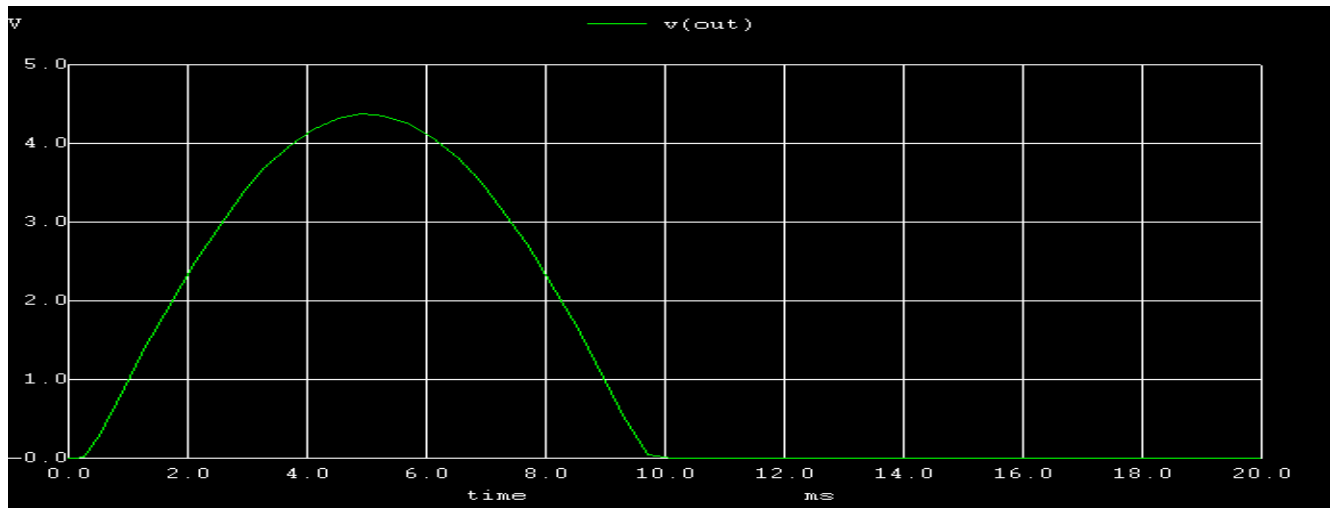


NGSPICE PLOT

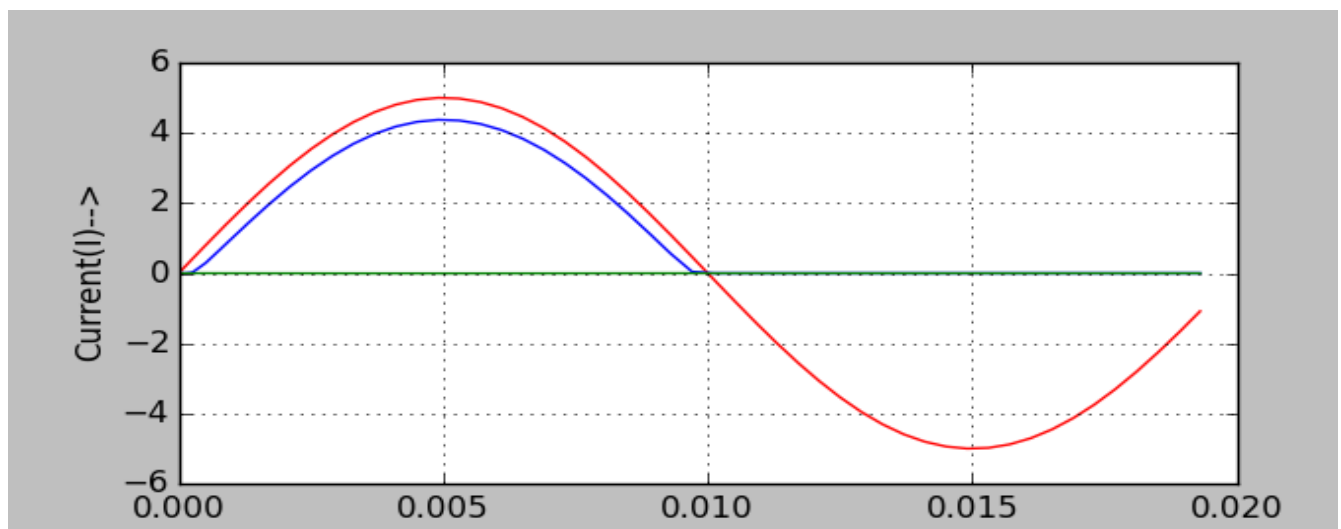
INPUT PLOT:



OUTPUT PLOT:



PYTHON PLOT:



REFERENCE:

1. <http://www.circuitgallery.com/2012/11/clipper-circuit-explanation.html> referred on 24/10/2017.

