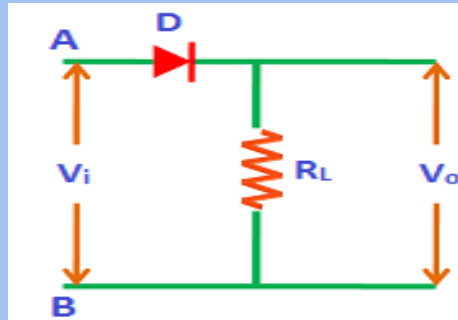


Series Negative Clipper

Elementrix Classes

Series Negative Clipper

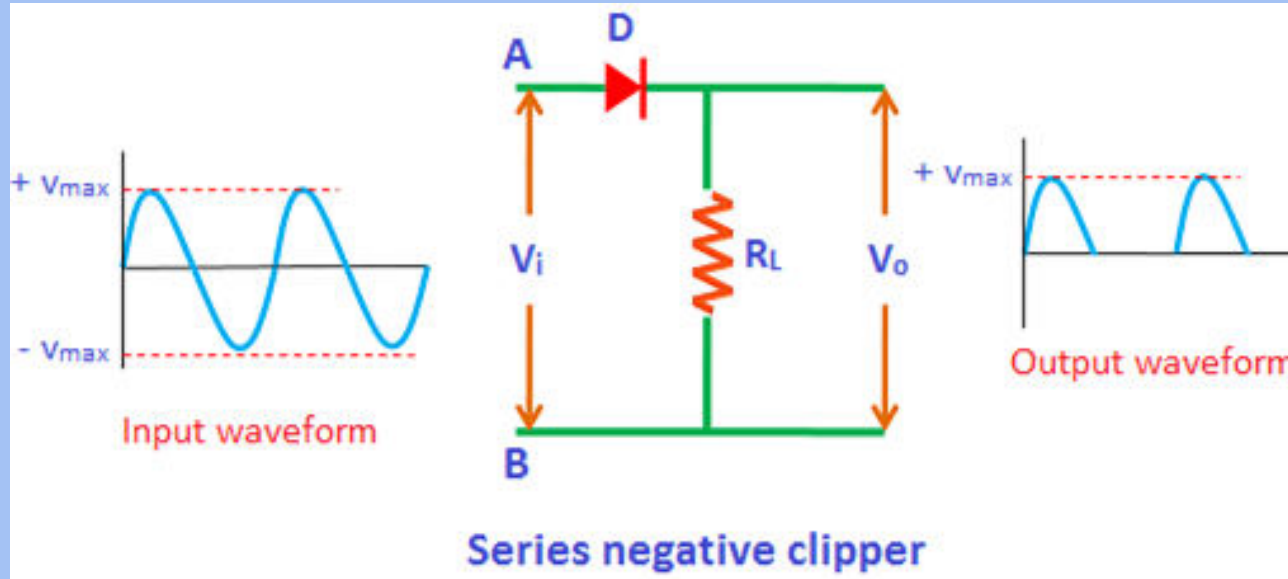
- In series negative clipper, the negative half cycles of the input AC signal is removed at the output. The circuit construction of the series negative clipper is shown in the figure.



- If the diode is arranged in such a way that the arrowhead of the diode points towards the output and the diode is in series with the output load resistance, then the clipper is said to be a series negative clipper.

- ❑ In simple words, in a series negative clipper, the diode is connected in a direction opposite to that of the series positive clipper.
- ❑ The vertical line in the diode symbol represents the cathode (n-side) and the opposite end represents the anode (p-side).

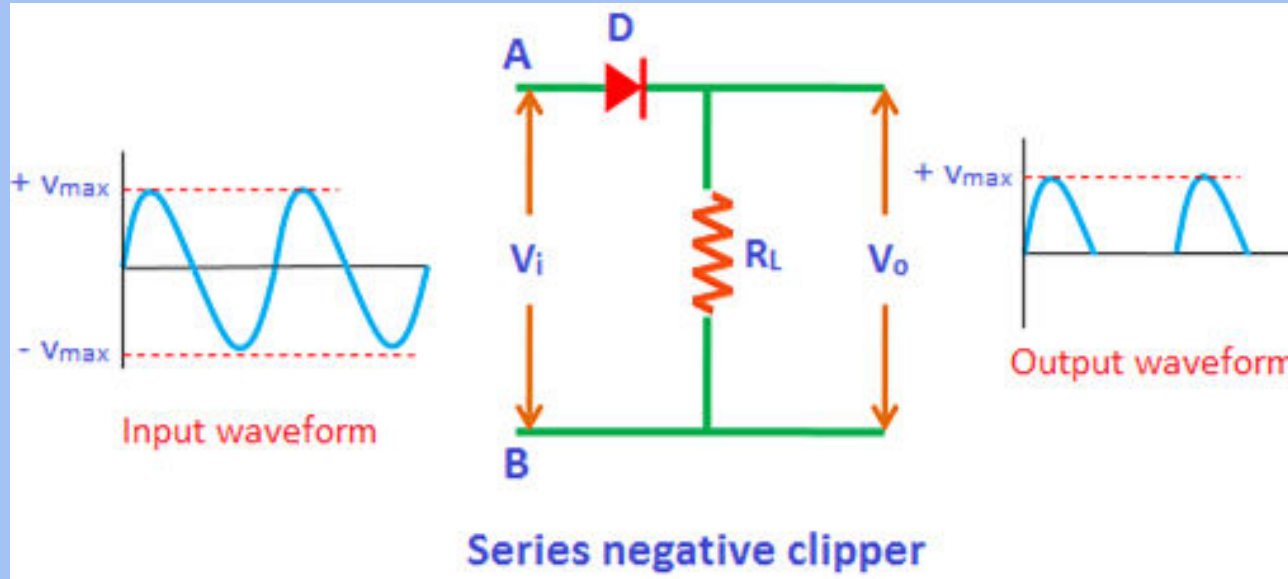
❖ During positive half cycle:



- During the positive half cycle, terminal A is positive and terminal B is negative. That means the positive terminal A is connected to p-side and the negative terminal B is connected to n-side of the diode.

- ❑ As we already know that if the positive terminal is connected to p-side and the negative terminal is connected to n-side then the diode is said to be forward biased. Therefore, the diode D is forward biased during the positive half cycle.
- ❑ During forward biased condition, electric current flows through the diode. So the positive half cycle is allowed at the output. Therefore, a series of positive half cycles appears at the output.

❖ During negative half cycle:



- During the negative half cycle, the terminal A is negative and the terminal B is positive. That means the negative terminal A is connected to p-side and the positive terminal B is connected to n-side of the diode.

- ❑ As we already know that if the negative terminal is connected to p-side and the positive terminal is connected to n-side then the diode is said to be reverse biased. Therefore, the diode D is reverse biased during the negative half cycle.
- ❑ During reverse biased condition, no current flows through the diode. So the negative half cycle is completely blocked or removed at the output. In other words, a series of negative half cycles are removed at the output.
- ❑ Thus, the series negative clipper removes the series of negative half cycles.

पढ़िए और पढ़ाइये

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