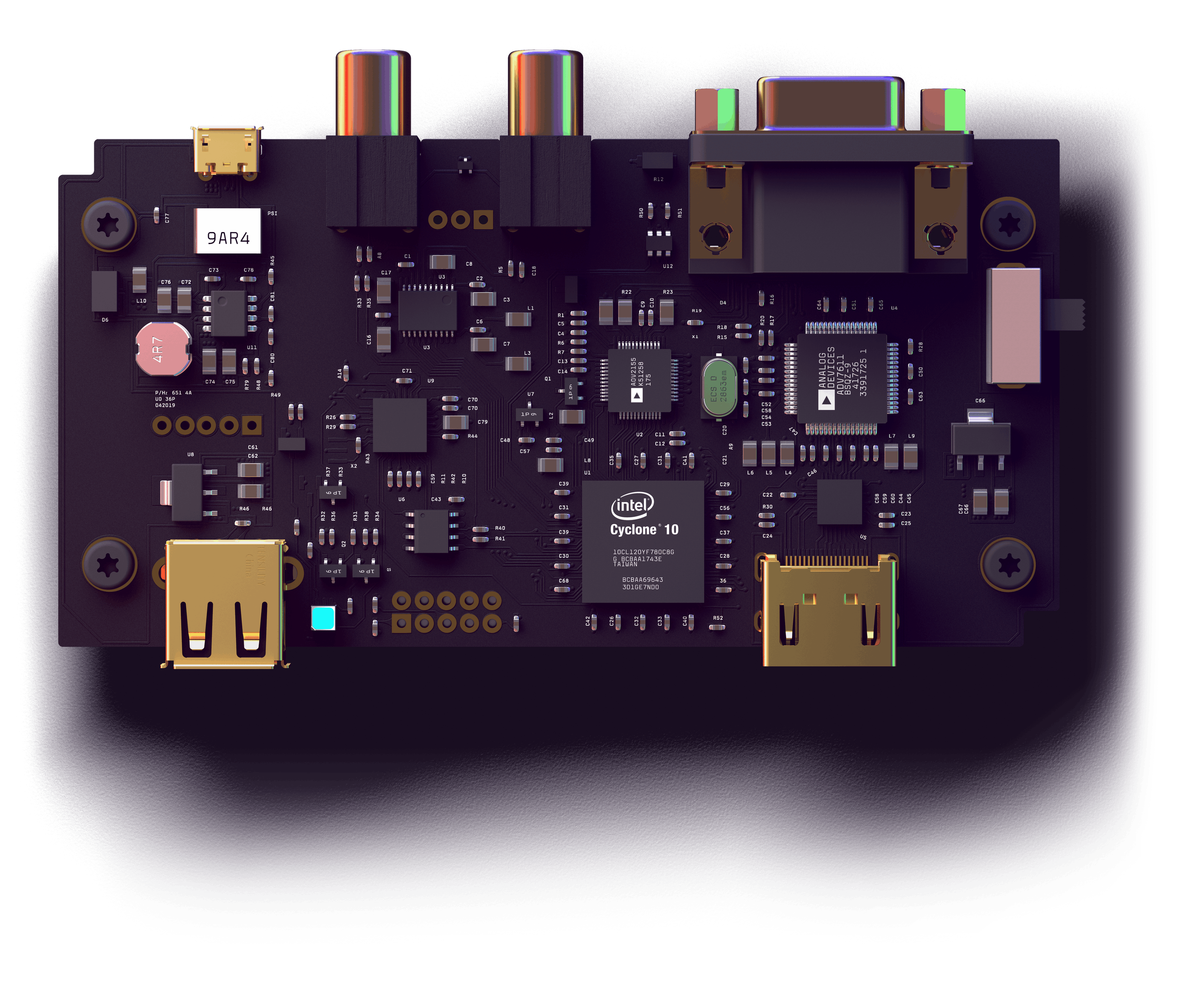
**EC205**

**Analog Electronics Lab**

**Lab – 2**



**Utkarsh R Mahajan 201EC164**

**Sannan Ali 201EC159**

**Experiment 2: Clipping and Clamping Circuits**

**Aim: To study clipping circuits and clamping circuits**

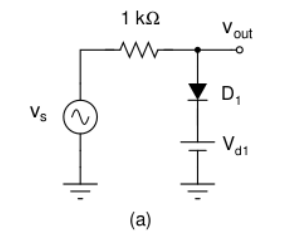
**i) Clipping Circuits**

**ii) Clamping Circuits**

**i.1]**

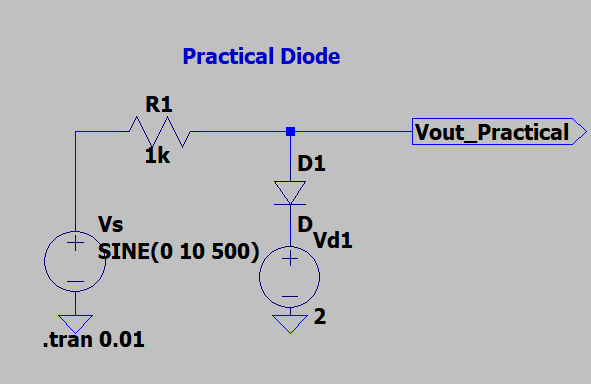
**Output will be clipped when in forward bias.**

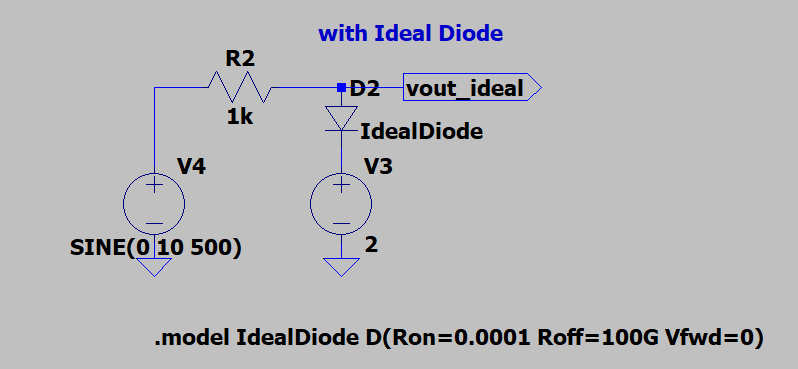
**Circuit diagram:**

****

**Circuit in LTspice:**

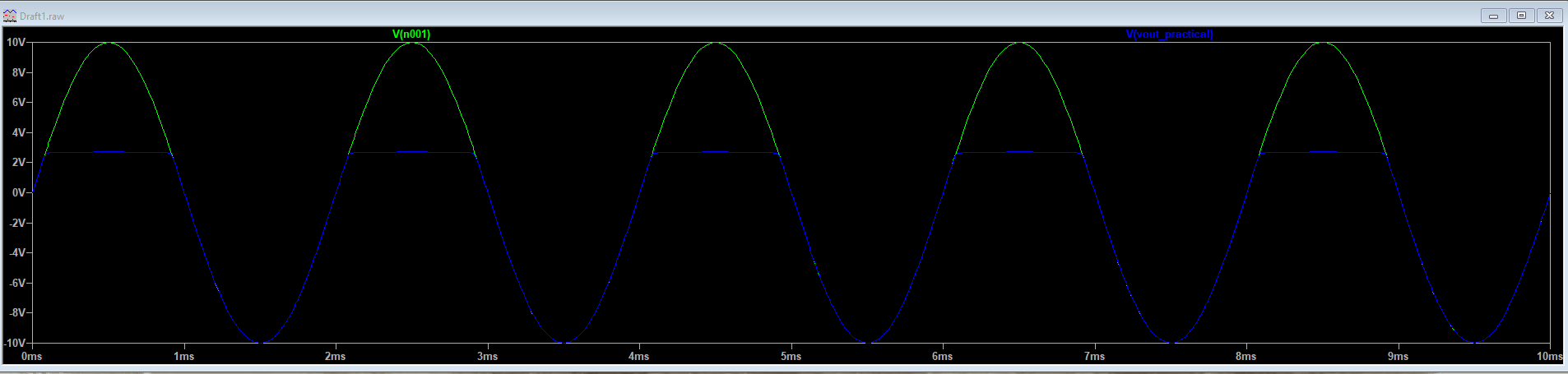
**Case 1: for Vd1=2V**

****

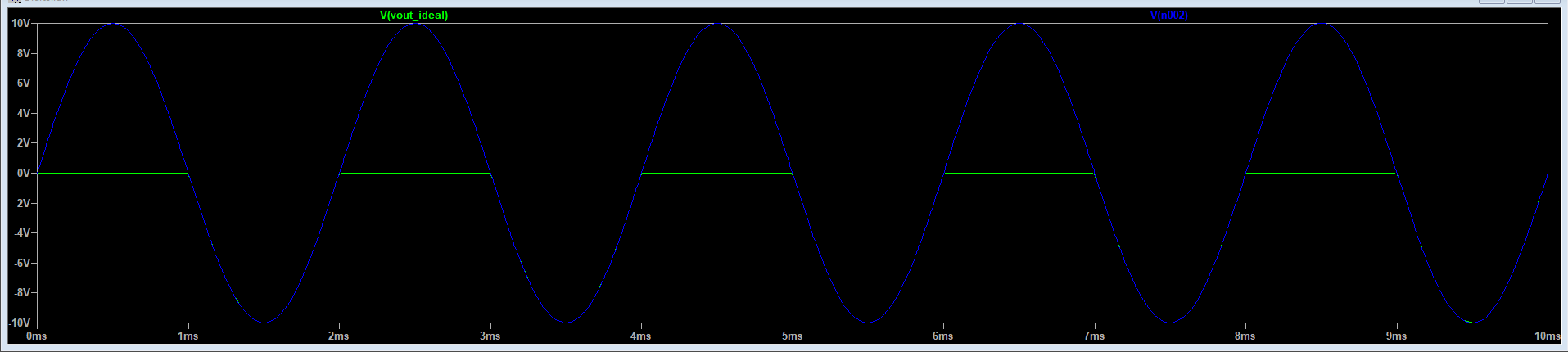
****

**Results:**

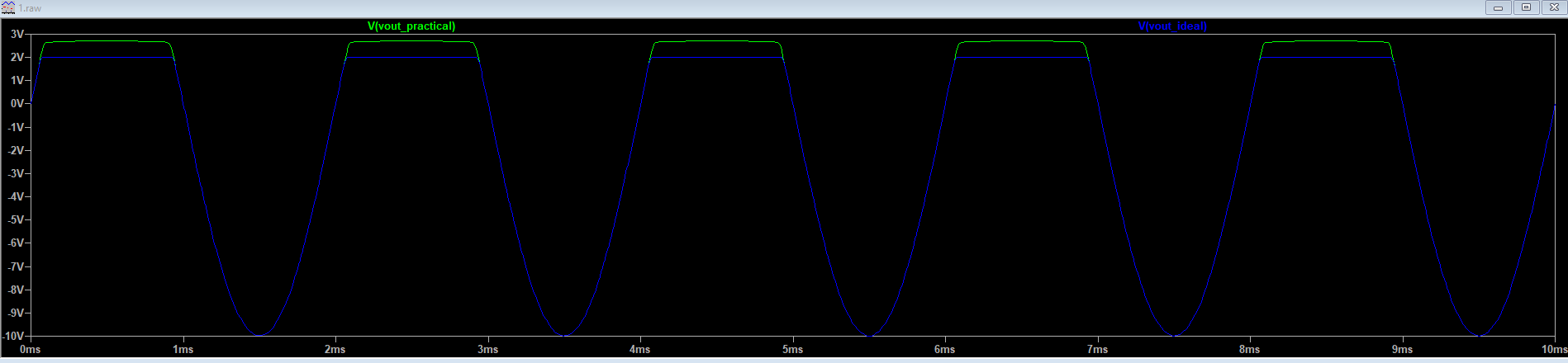
**For a practical Diode**

****

**For a Ideal Diode**

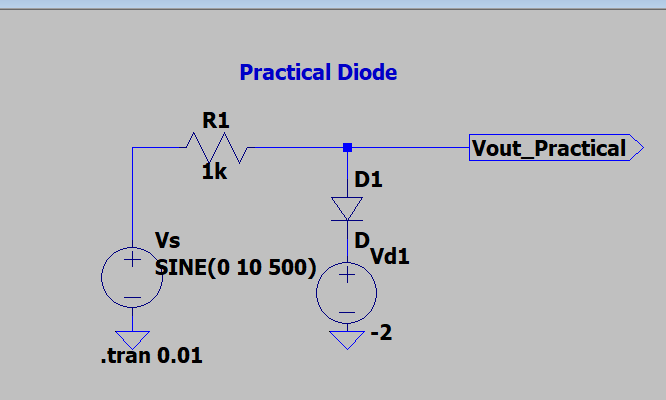
****

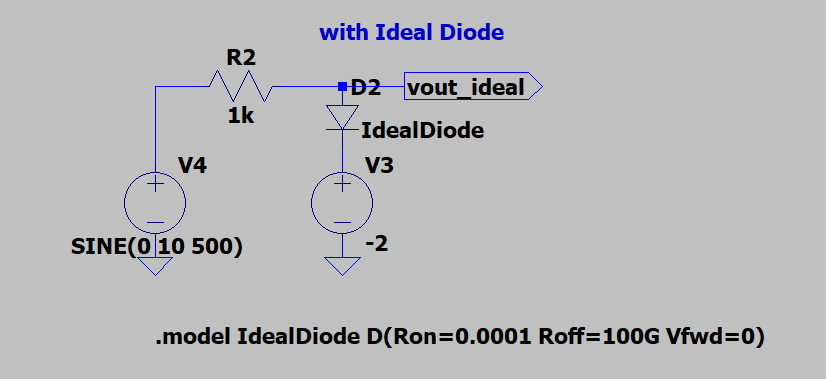
**Comparison between both**

****

**Circuit in LTspice:**

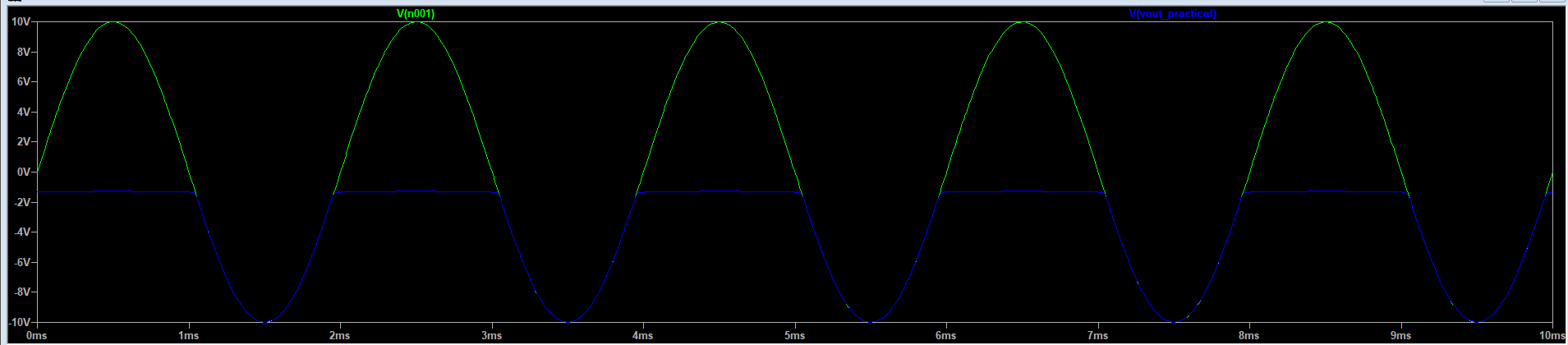
**Case 2: Vd2=-2V**

****

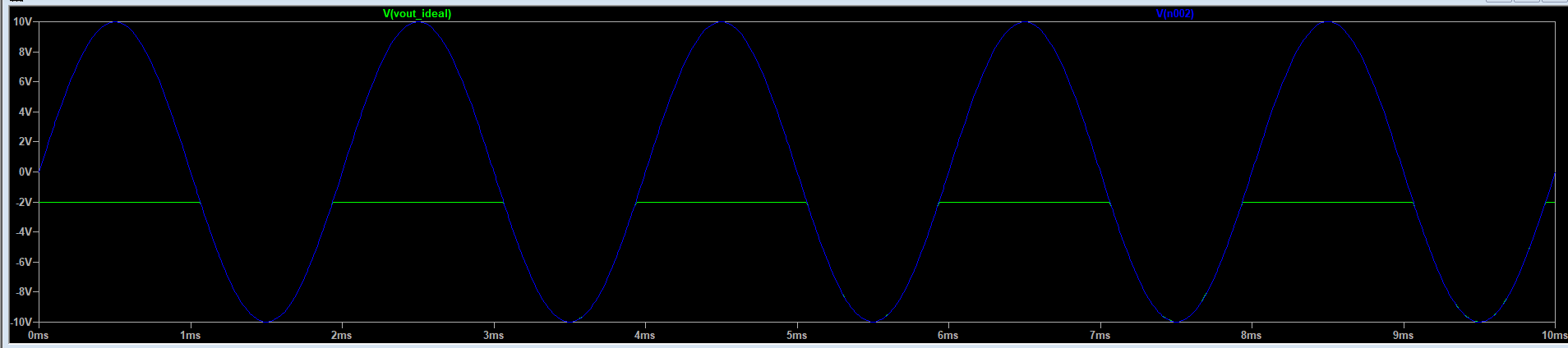
****

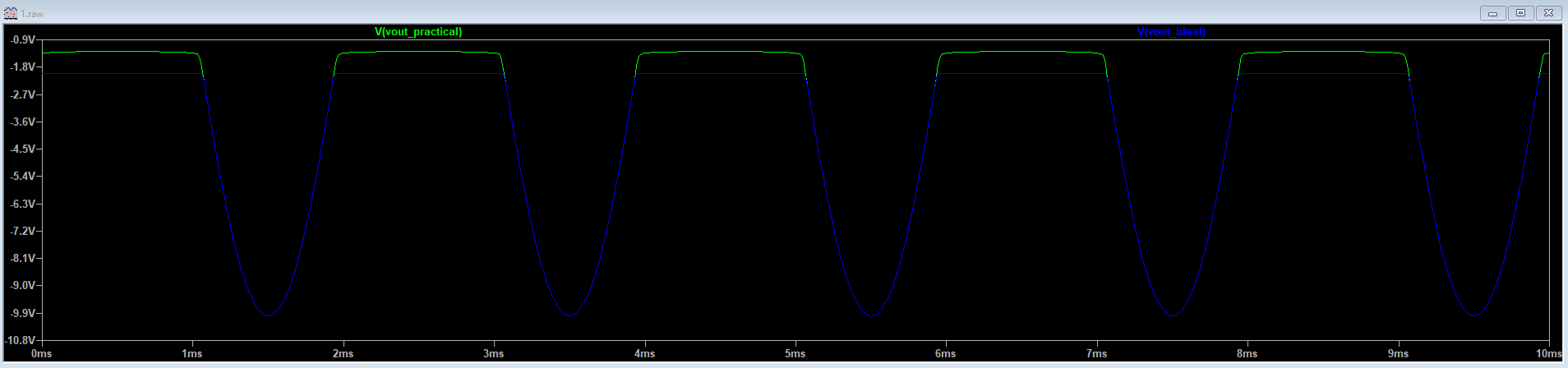
**Results:**

**For a practical Diode**

****

**For a Ideal Diode**

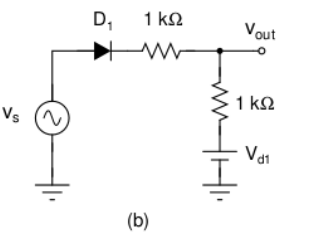
****

**Comparison between both**

**i.2]**

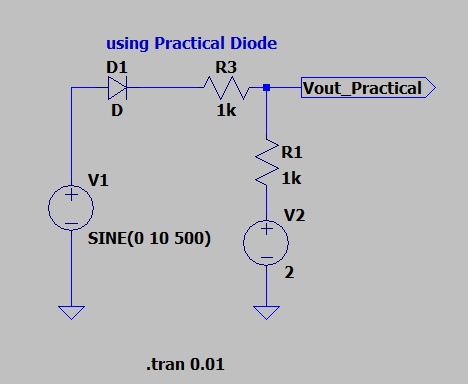
**Output Voltage will be clipped.**

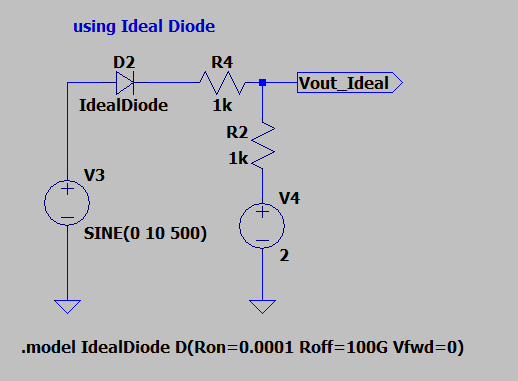
**Circuit diagram:**

****

**Circuit in LTspice:**

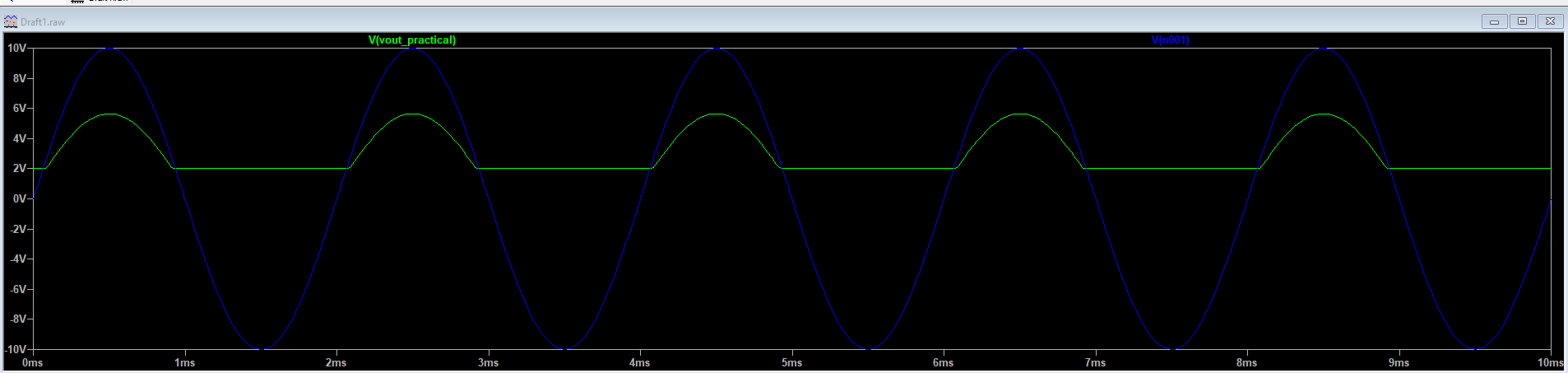
**for Vd1=2V**

****

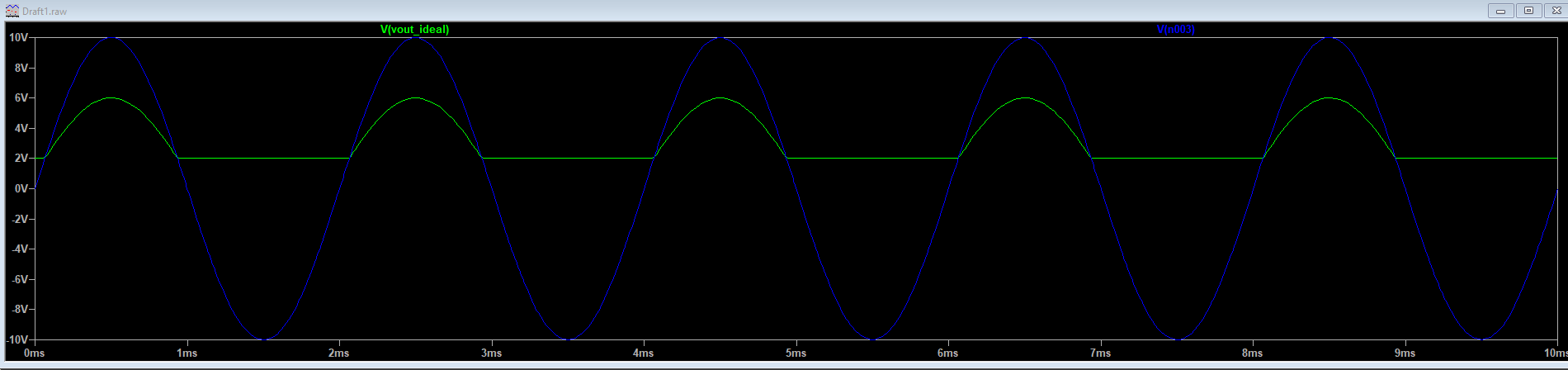
****

**Results:**

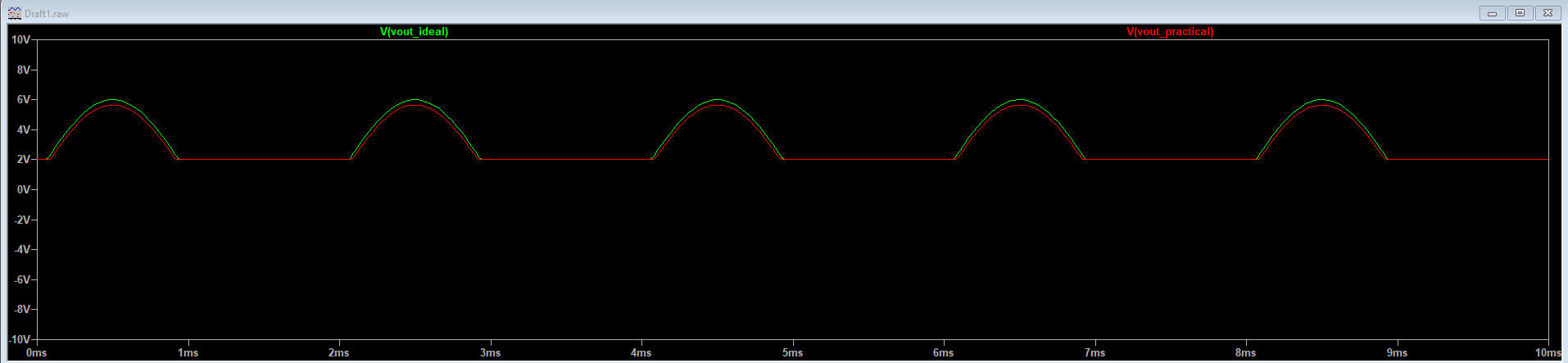
**For a practical Diode**

****

**For a Ideal Diode**

****

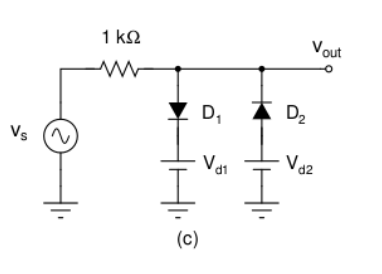
**Comparison between both**

****

**i.3]**

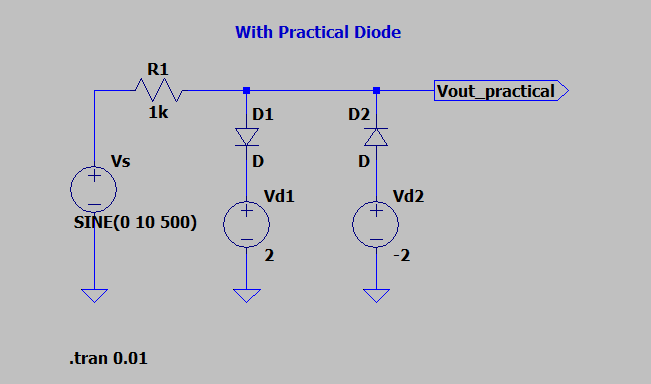
**Output Voltage will be clipped.**

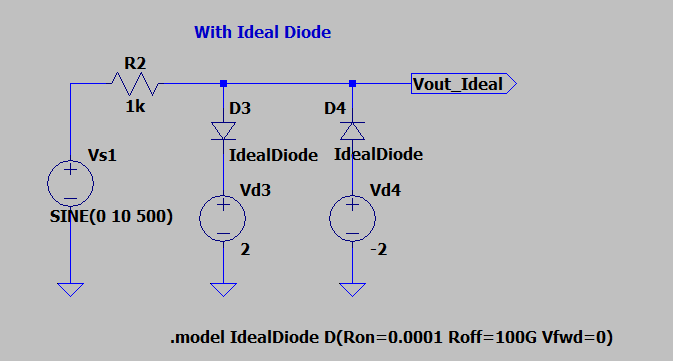
**Circuit diagram:**

****

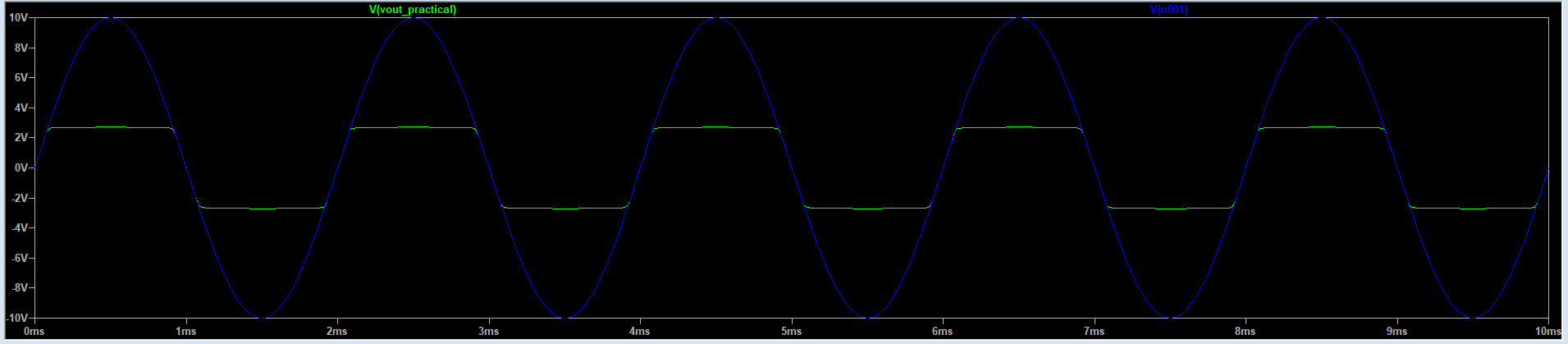
**Circuit in LTspice:**

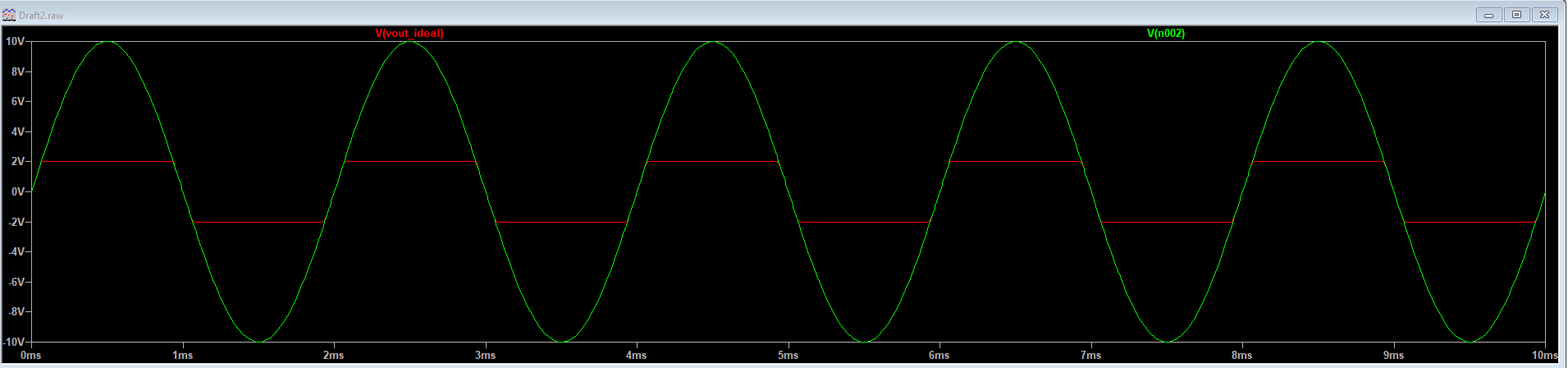
**for Vd1=2V and Vd2=-2V**

****

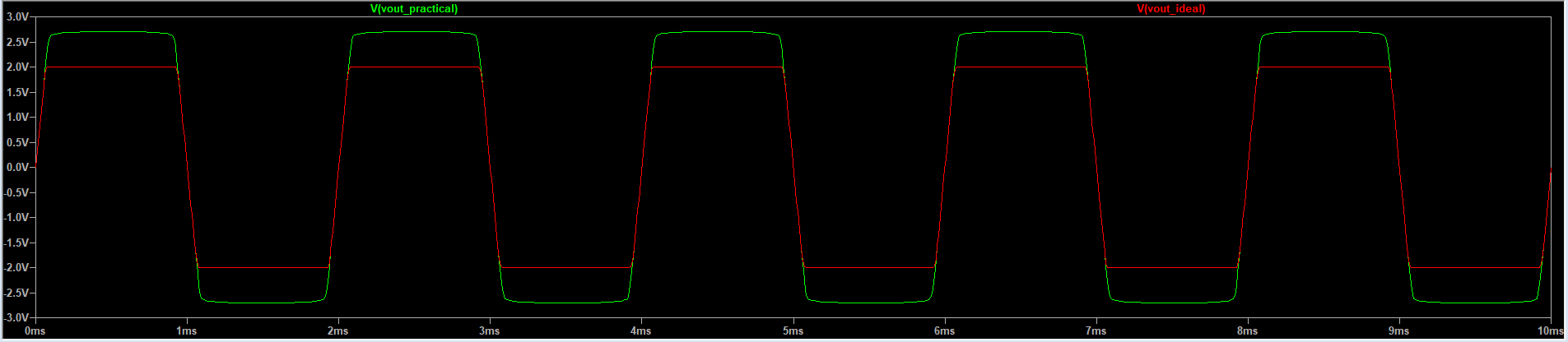
****

**Results:**

**For a practical Diode**

**For a Ideal Diode**

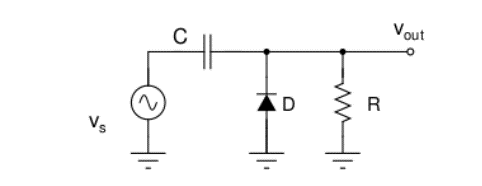
**Comparison between both**

****

**ii]**

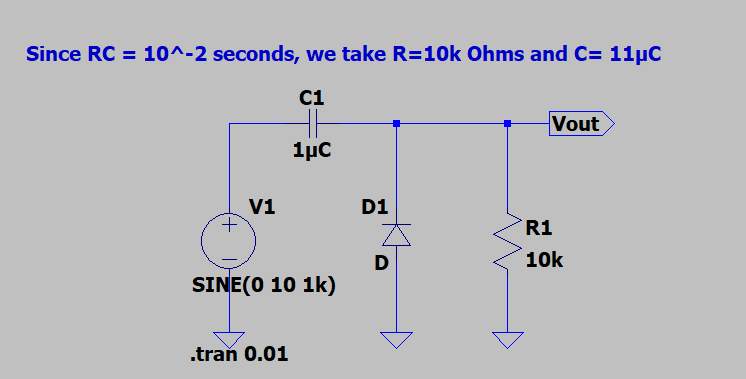
**Output voltage will be clamped**

**Circuit diagram:**

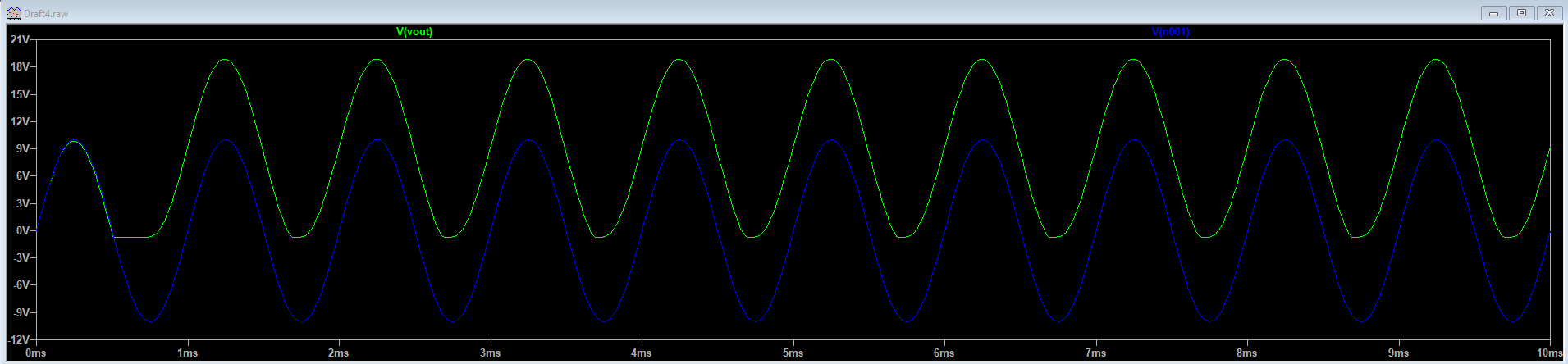


**Case 1: for VSpeak=10V, f=1kHz RC=10Ts so we take R = 10kΩ and C=1µF**

**Circuit in LTspice:**

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**Results:**

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