



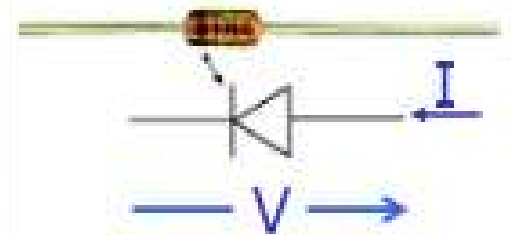
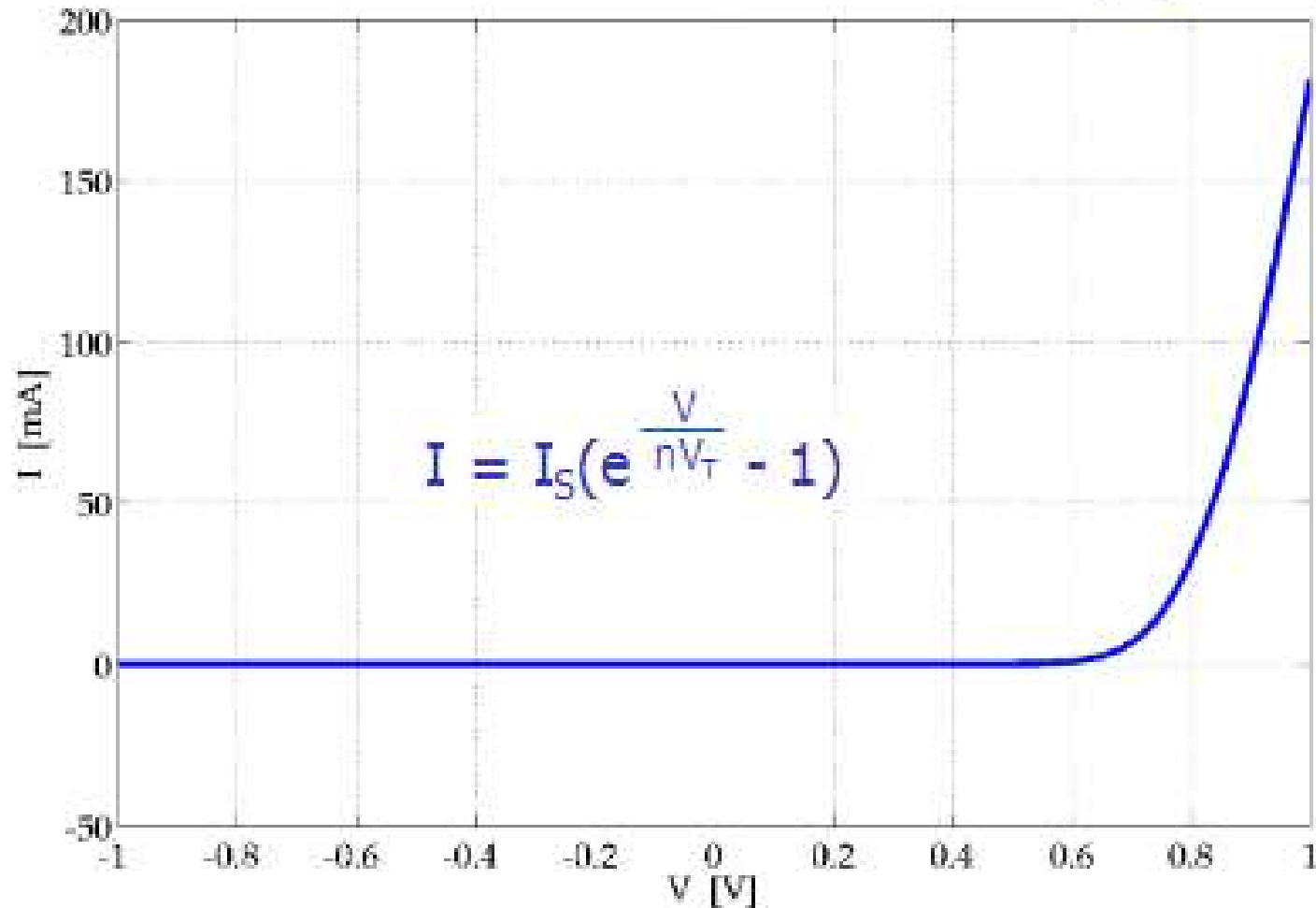
Elettronica I

- Terza Esercitazione -

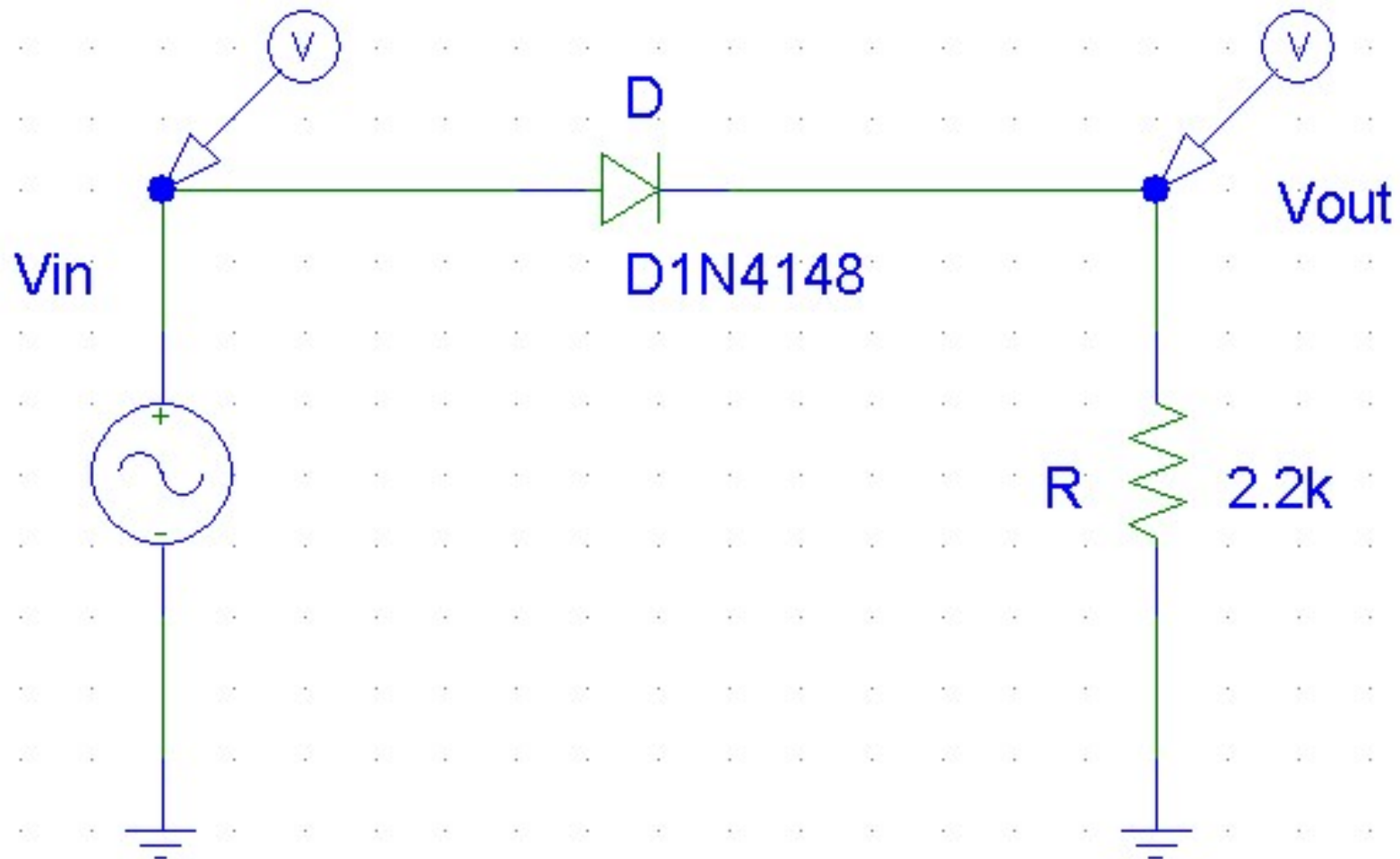
CIRCUITI CON DIODI

Caratteristica I(V) del Diodo 1N4148

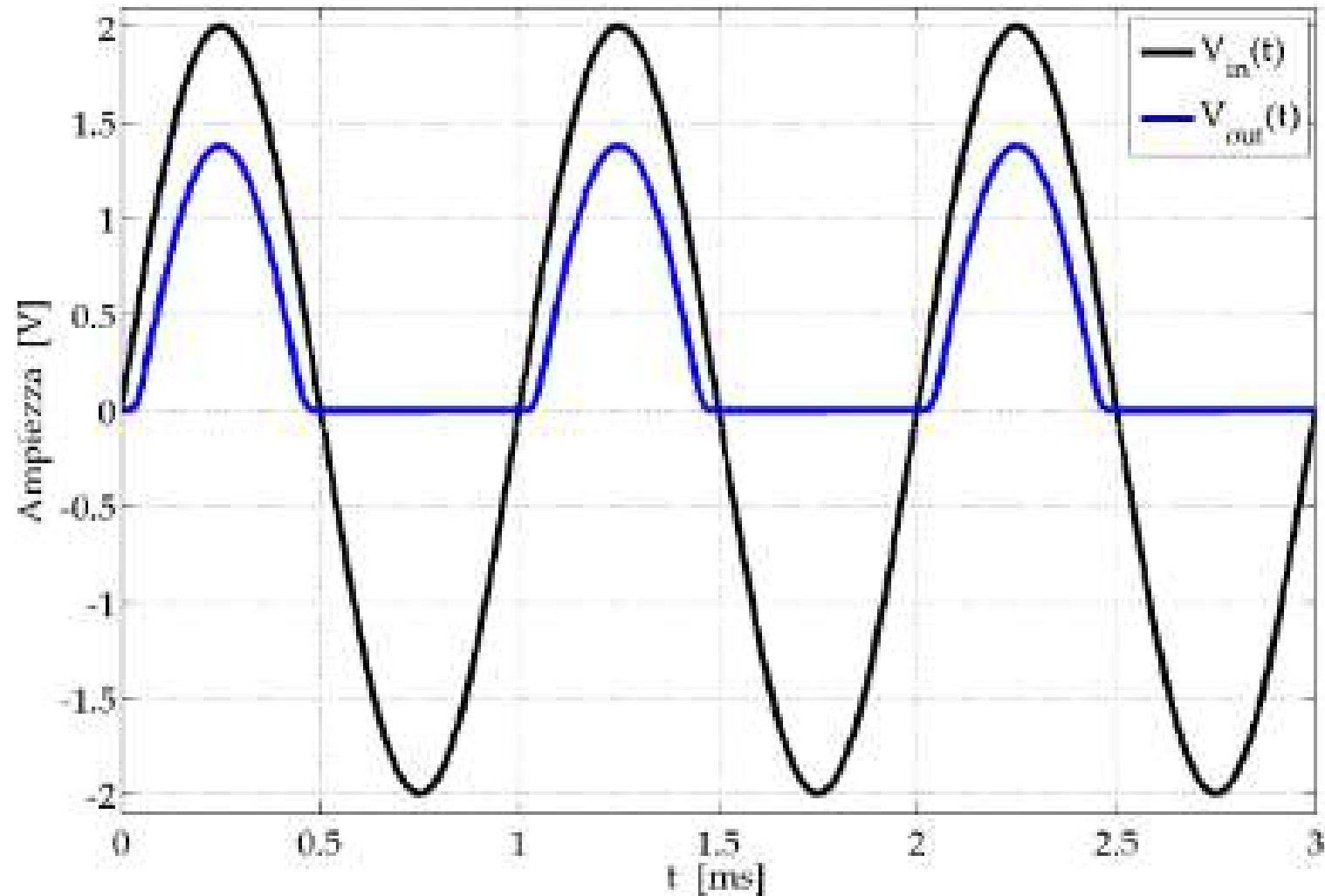
Datasheet del diodo a pag. 70



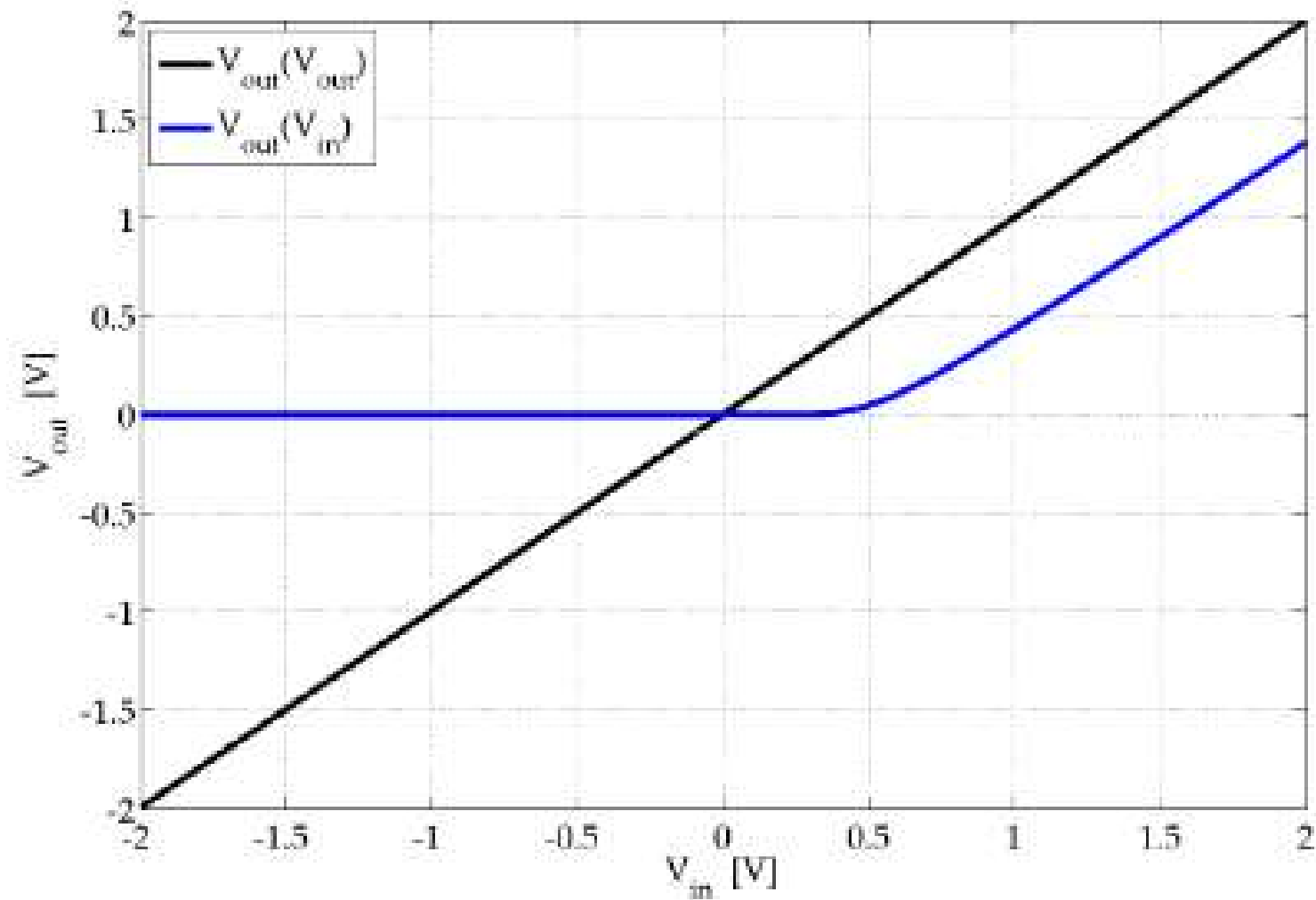
Raddrizzatore a Singola Semionda (uscita 1)



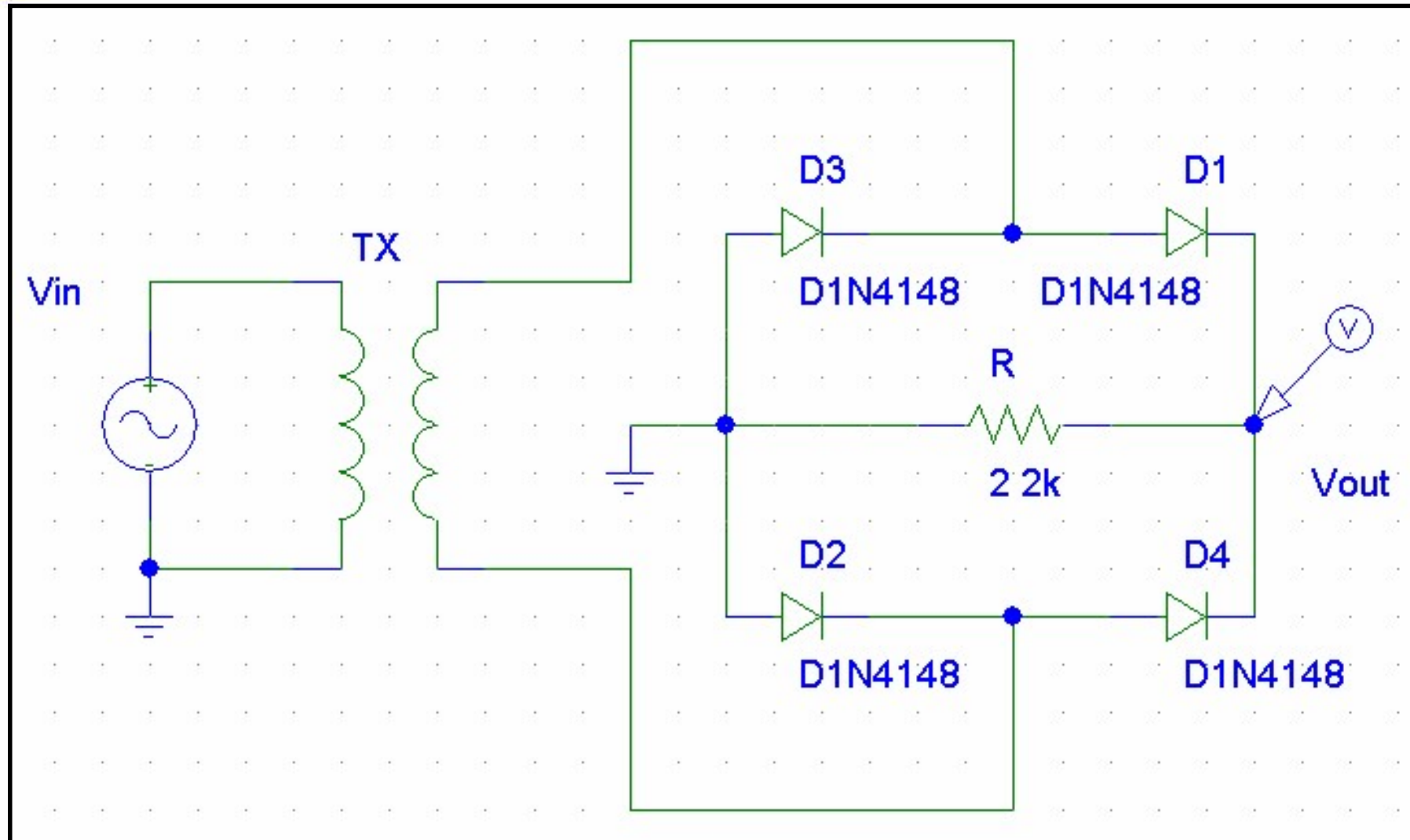
Raddrizzatore a Singola Semionda (uscita 1)



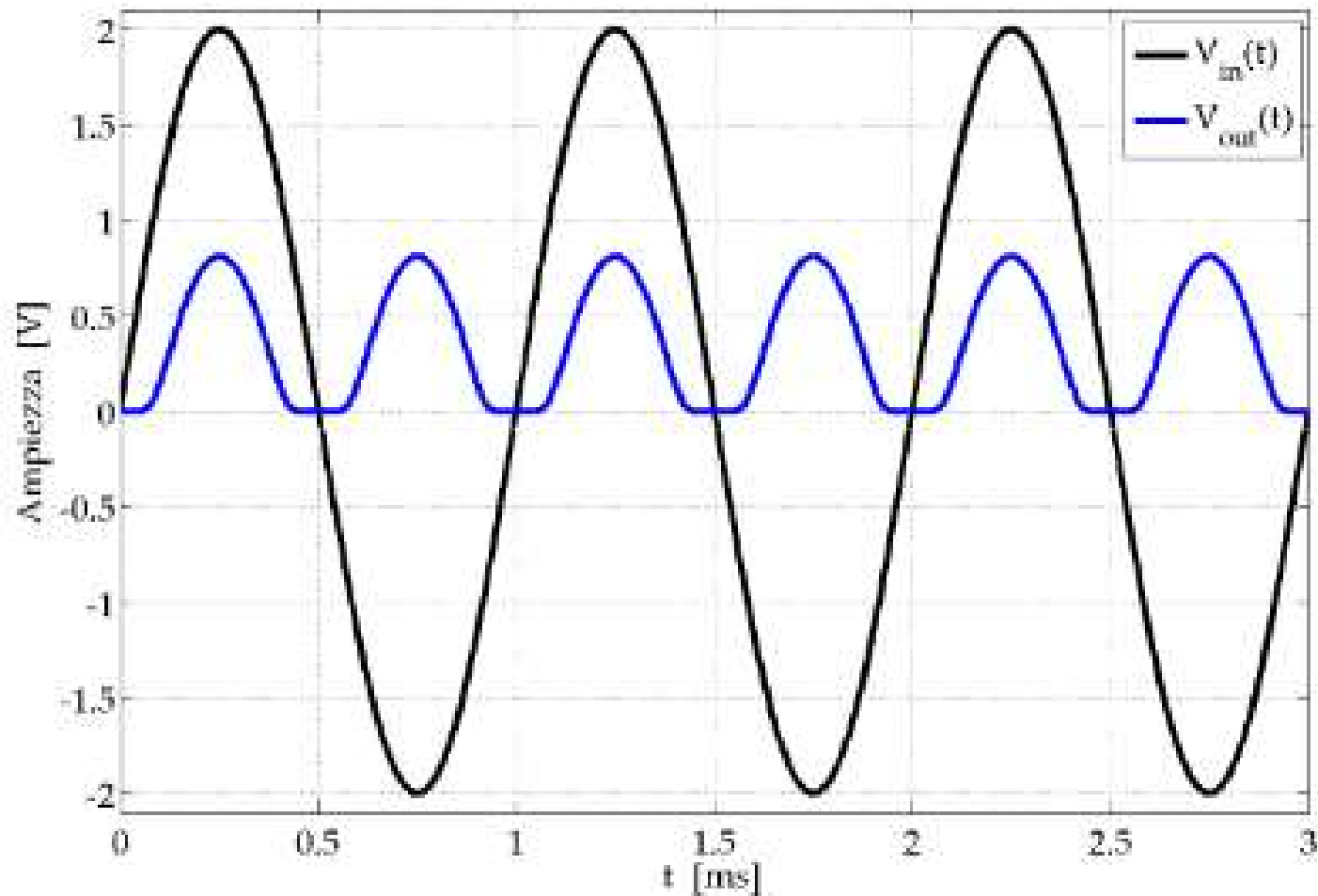
Caratteristica V_{out} (V_{in})



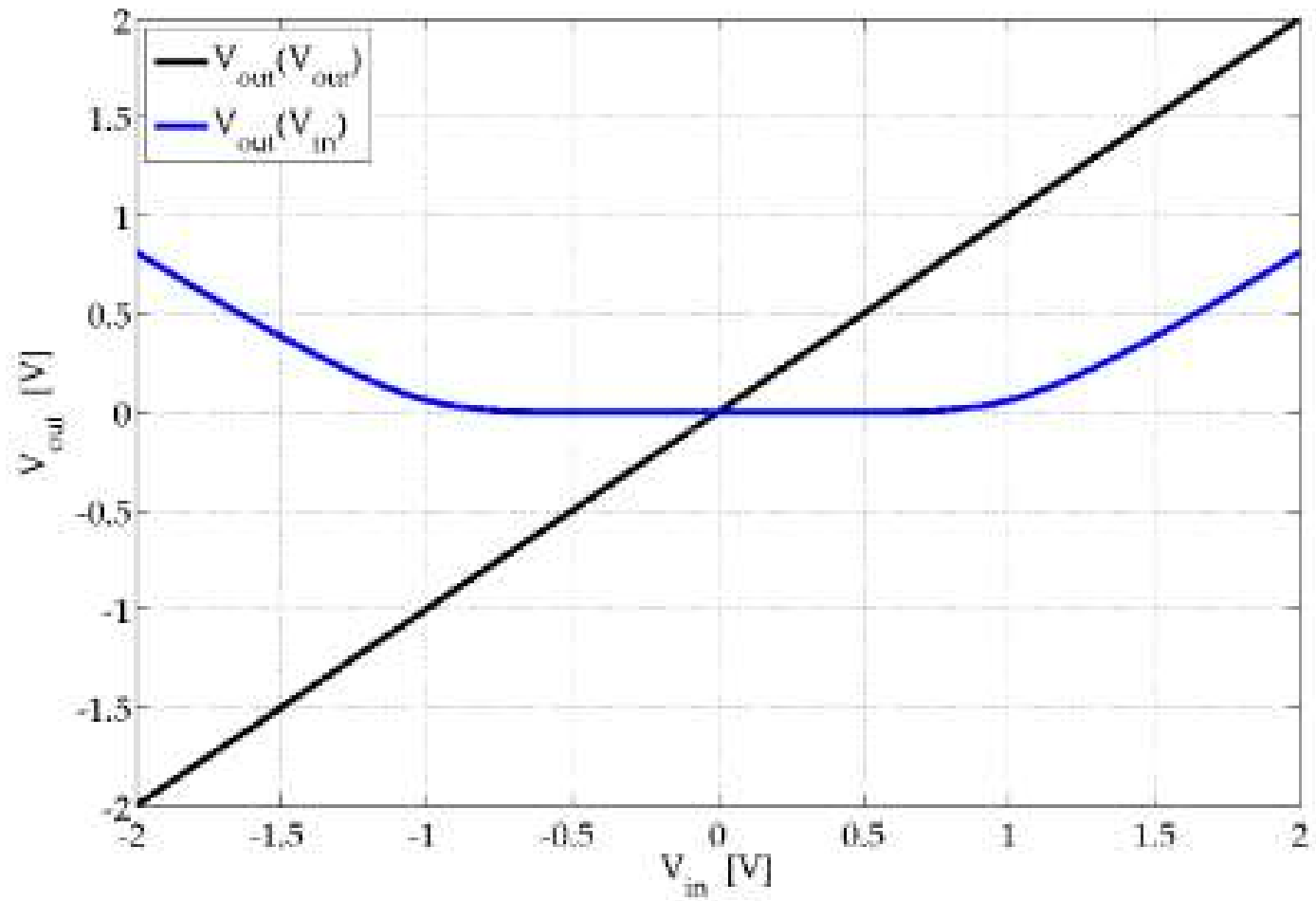
Raddrizzatore a Ponte di Diodi (uscita 2)



Raddrizzatore a Ponte di Diodi (uscita 2)

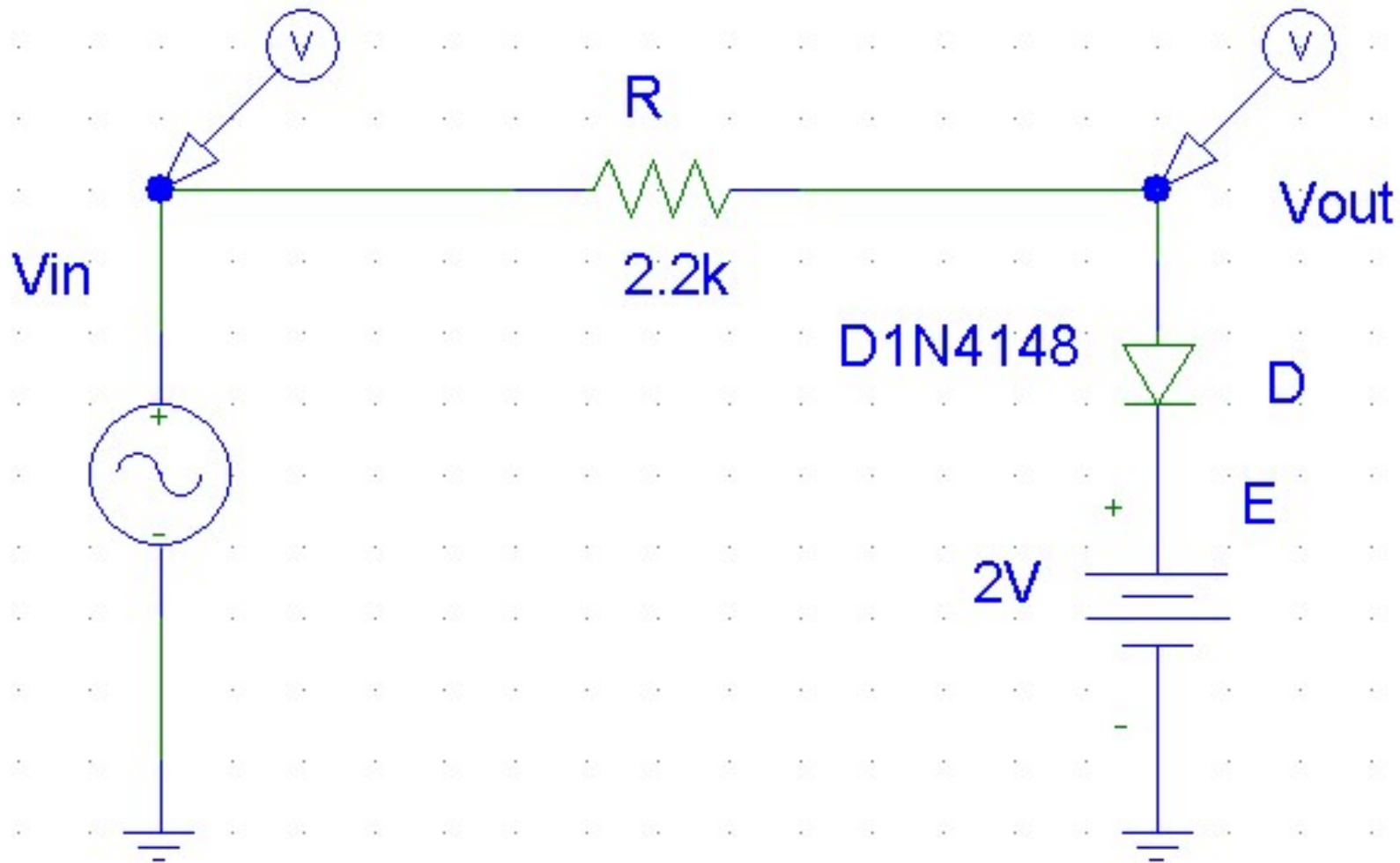


Caratteristica V_{out} (V_{in})



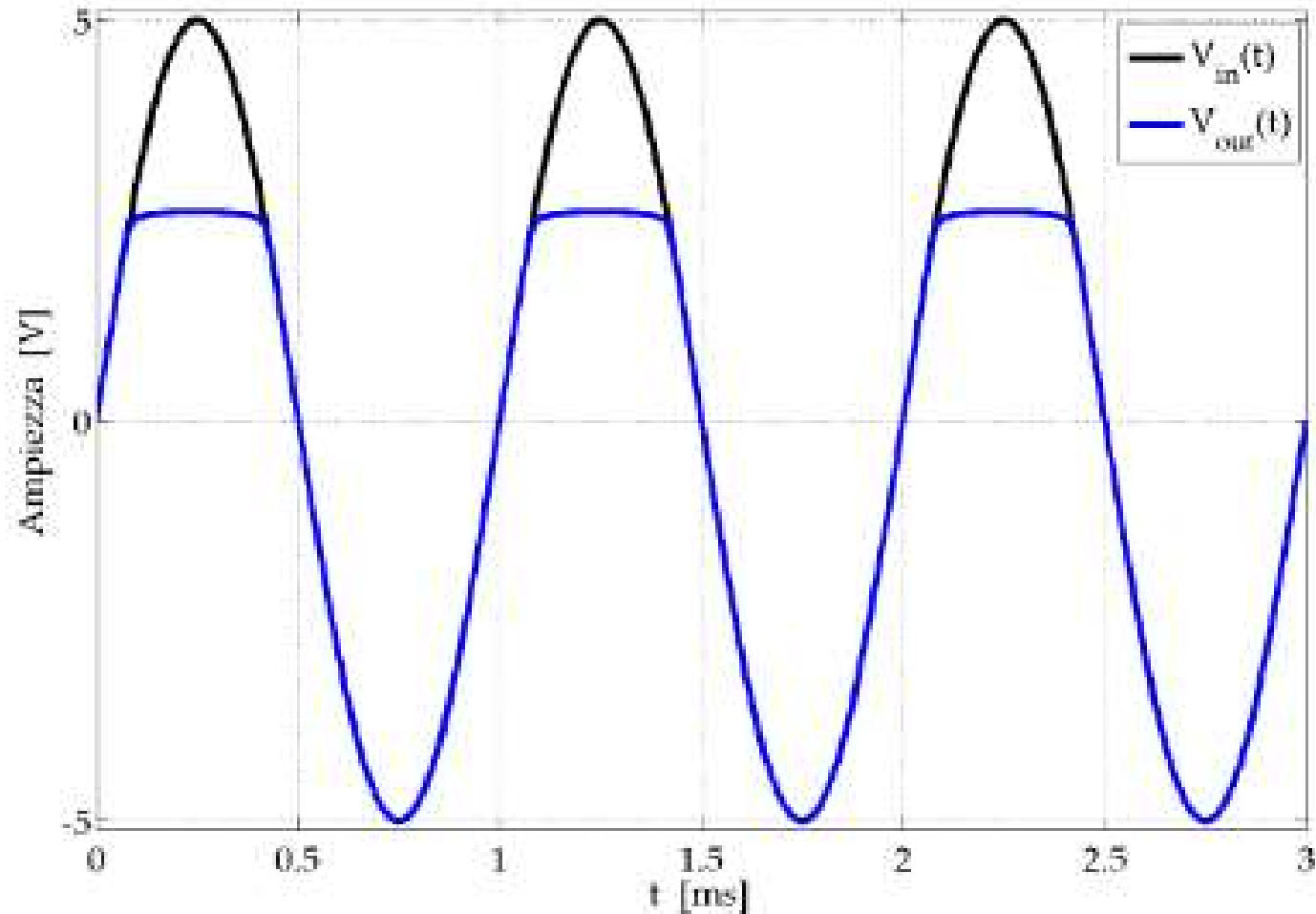
Limitatore al Valore Superiore

Clipping (uscita 3)

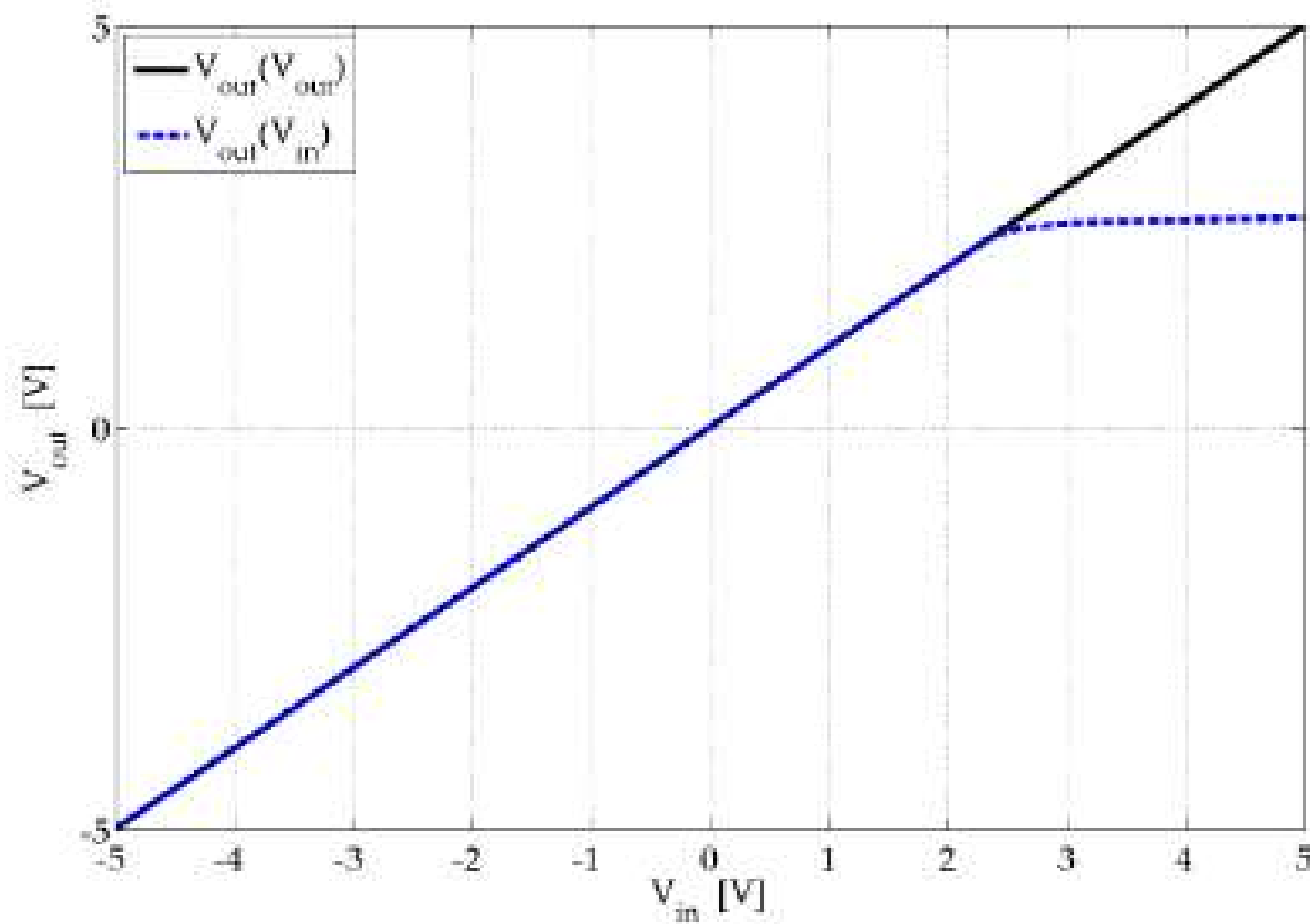


Limitatore al Valore Superiore

Clipping (uscita 3)

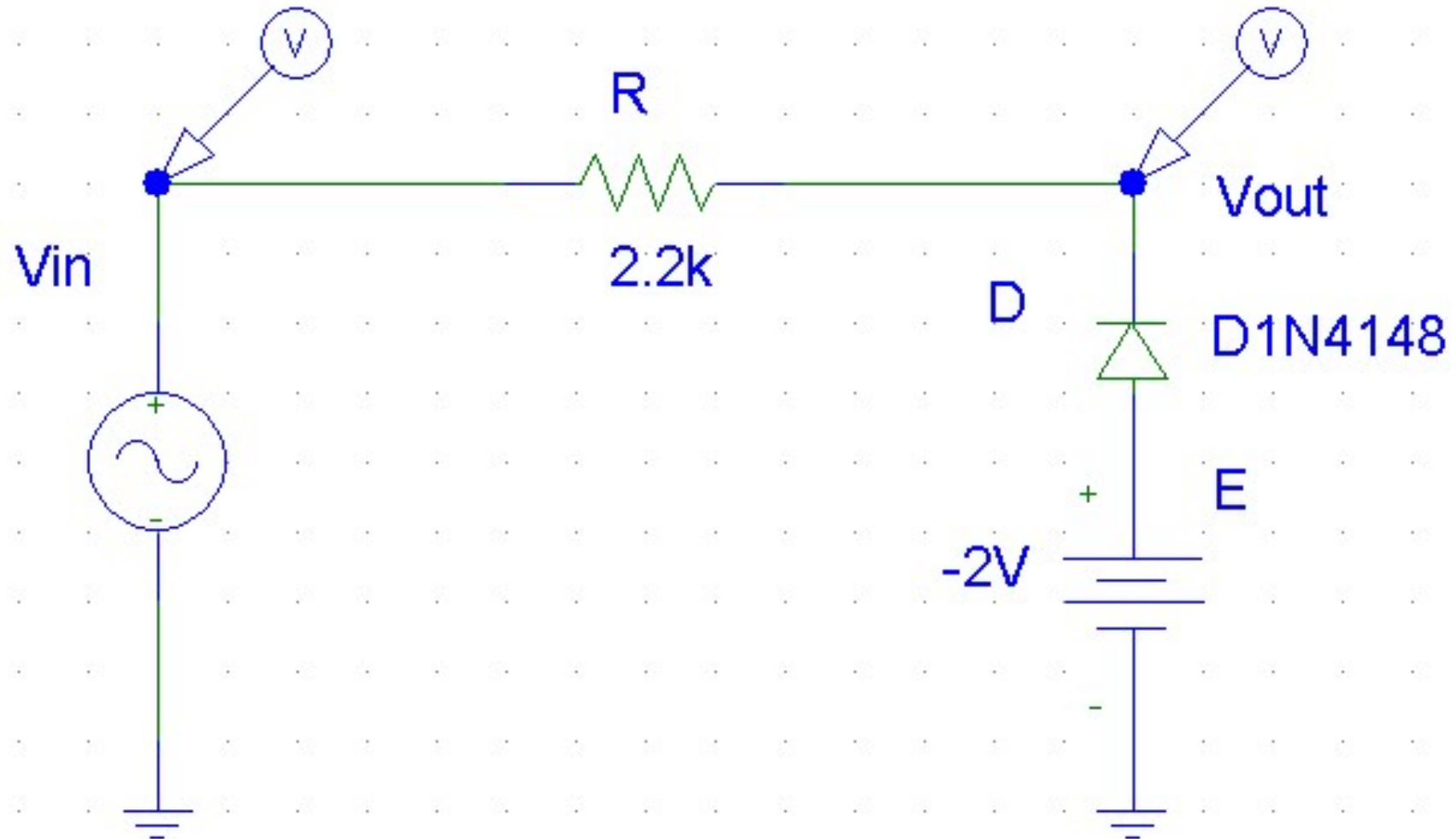


Caratteristica V_{out} (V_{in})



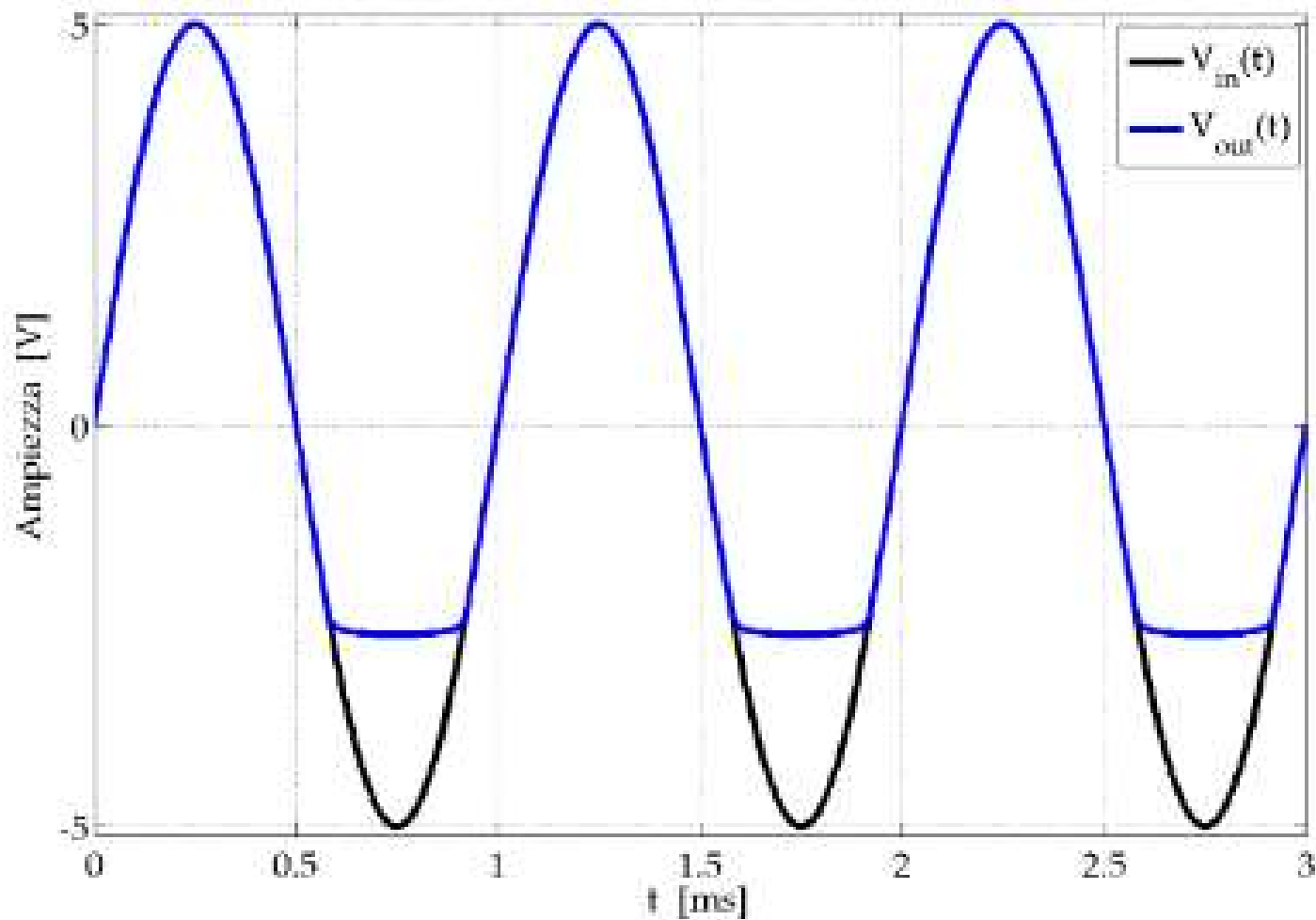
Limitatore al Valore Inferiore

Clipping (uscita 4)

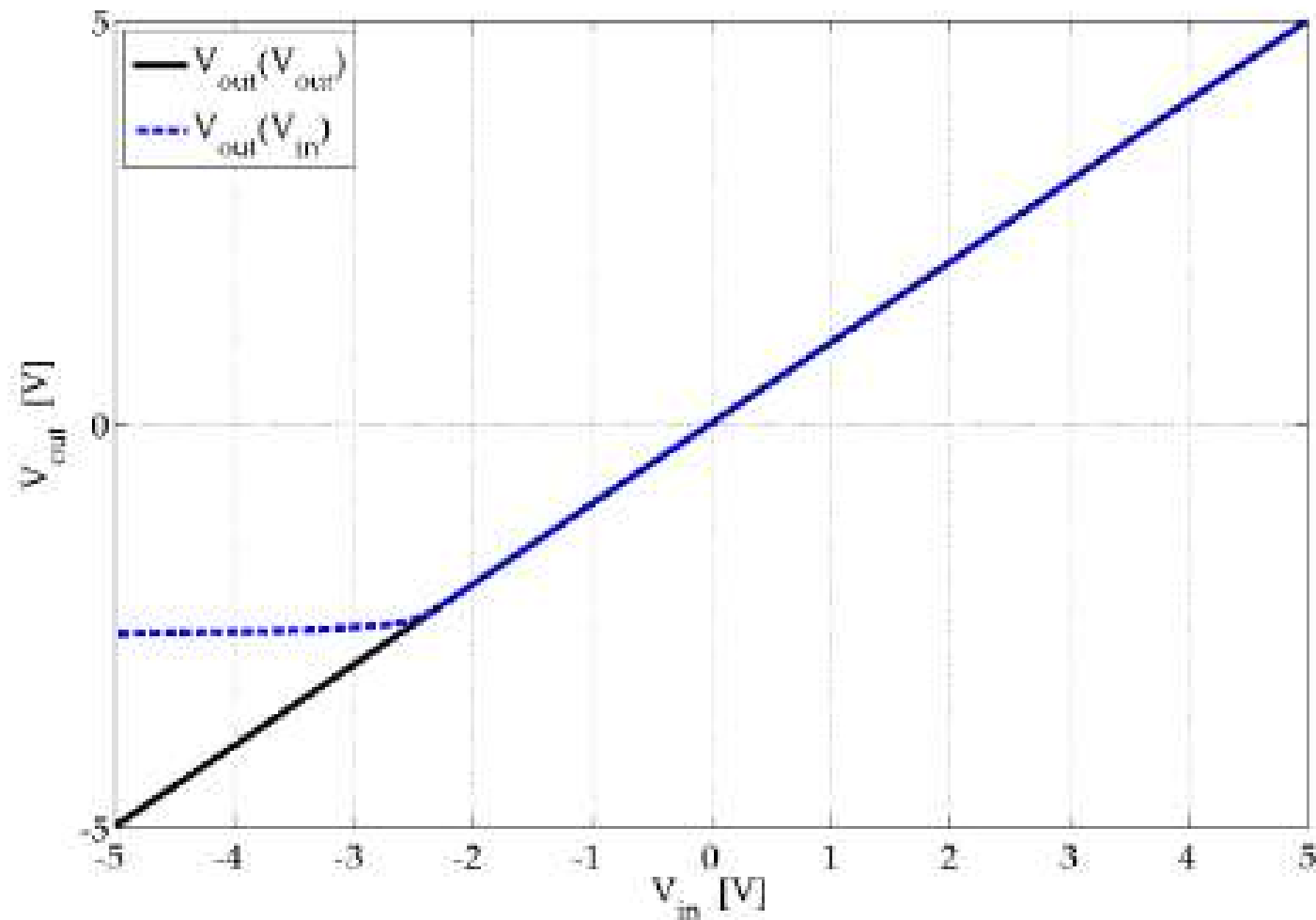


Limitatore al Valore Inferiore

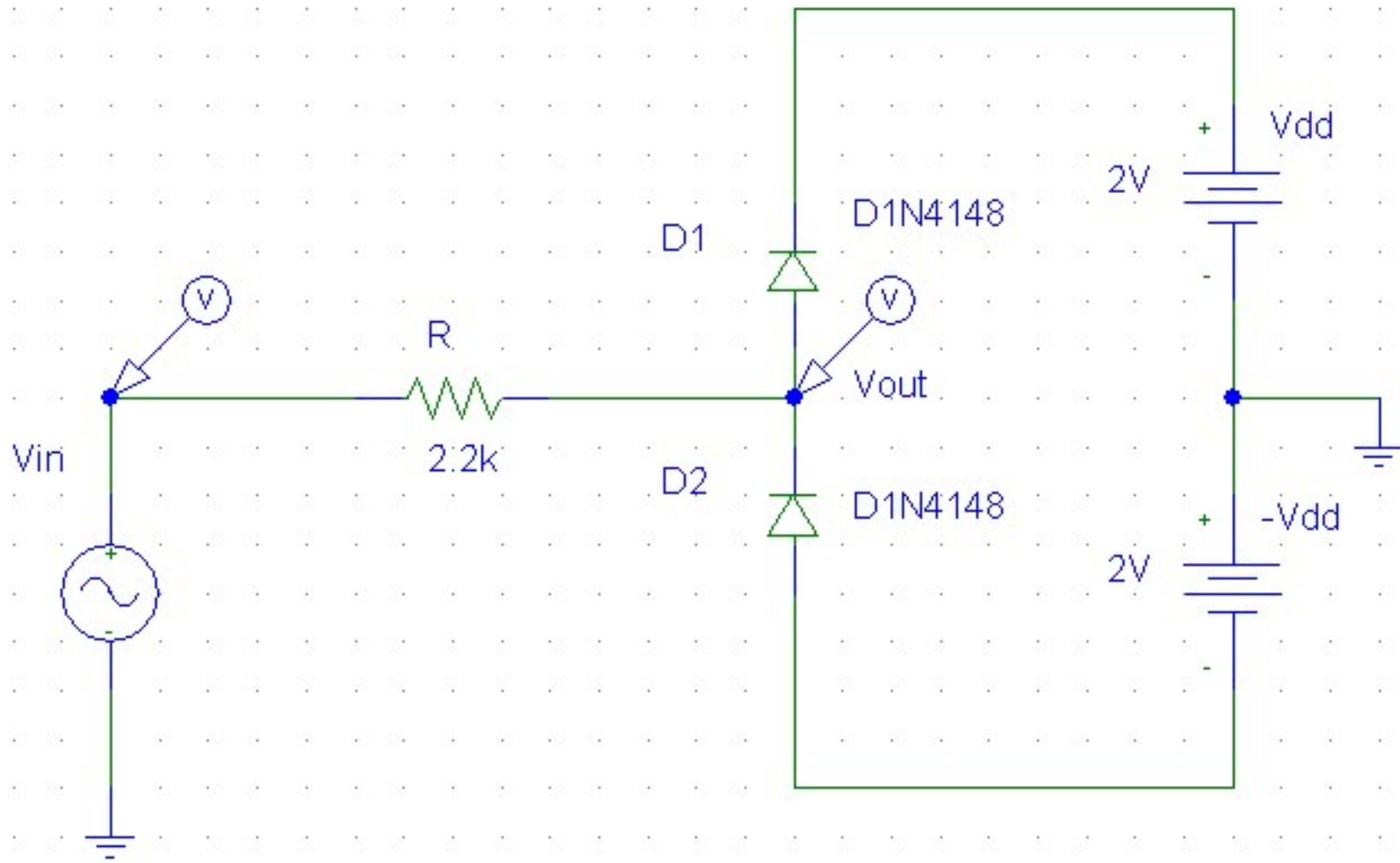
Clipping (uscita 4)



Caratteristica V_{out} (V_{in})

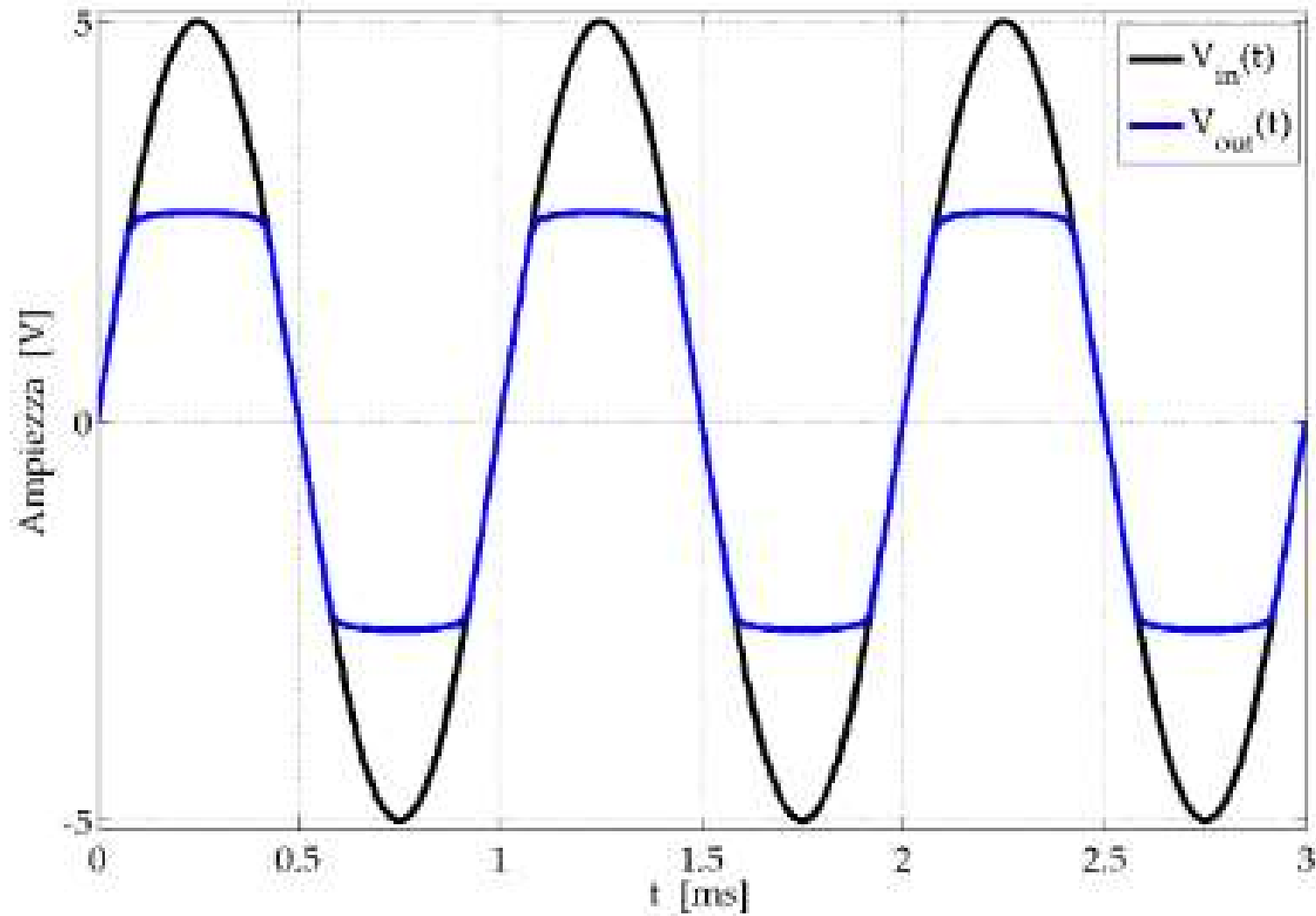


Limitatore Max/Min *Clipping*

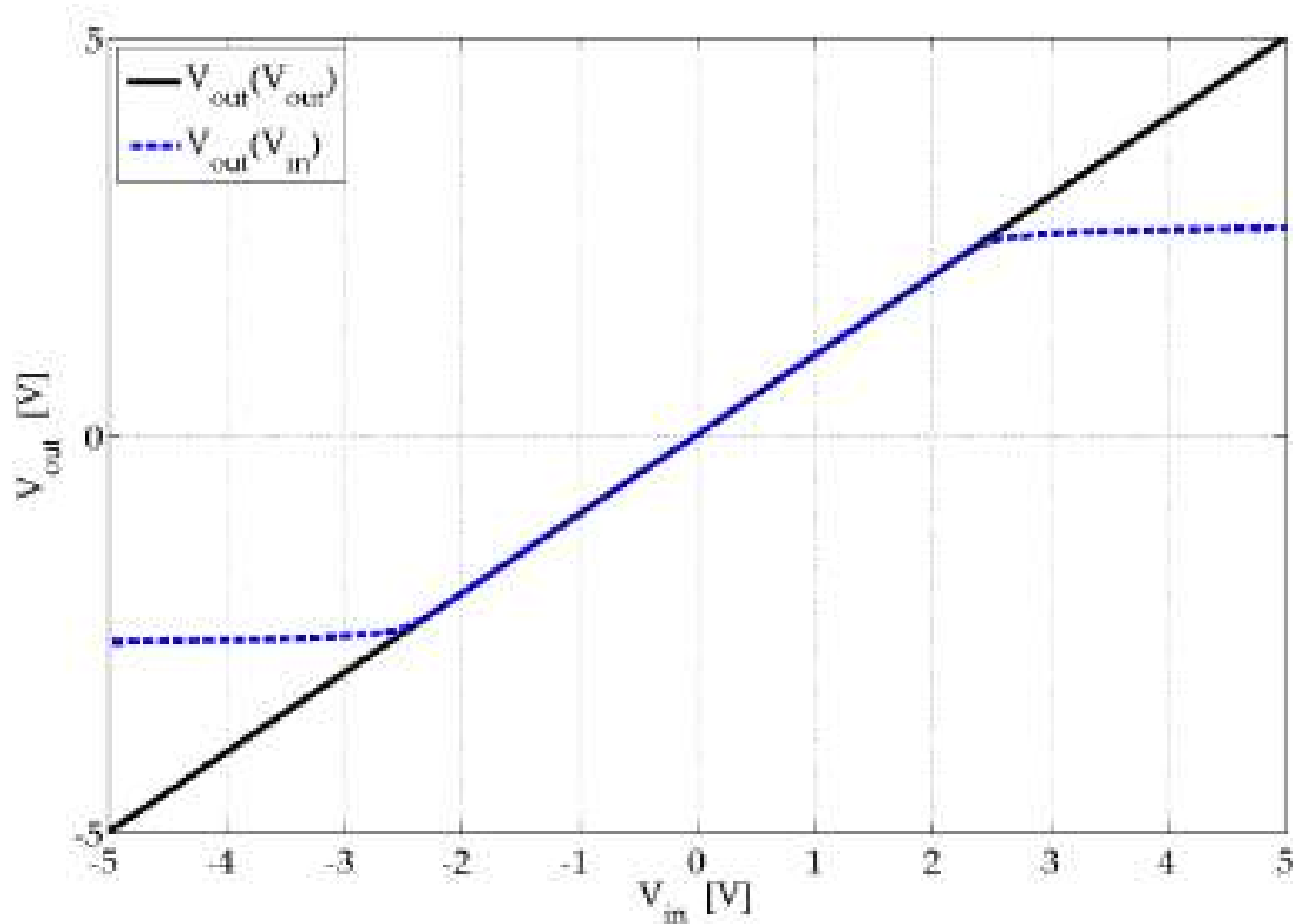


Limitatore Max/Min

Clipping

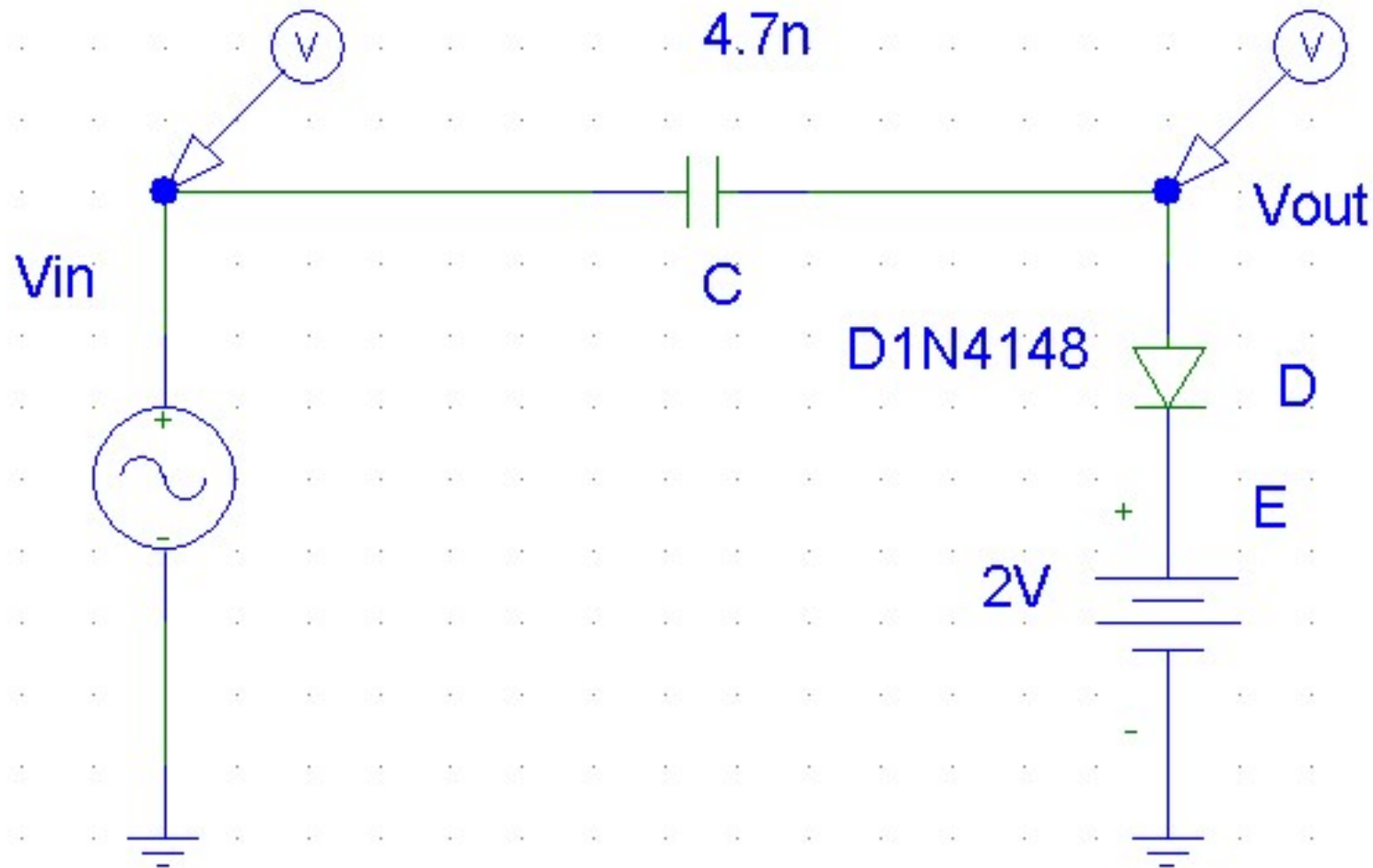


Caratteristica V_{out} (V_{in})

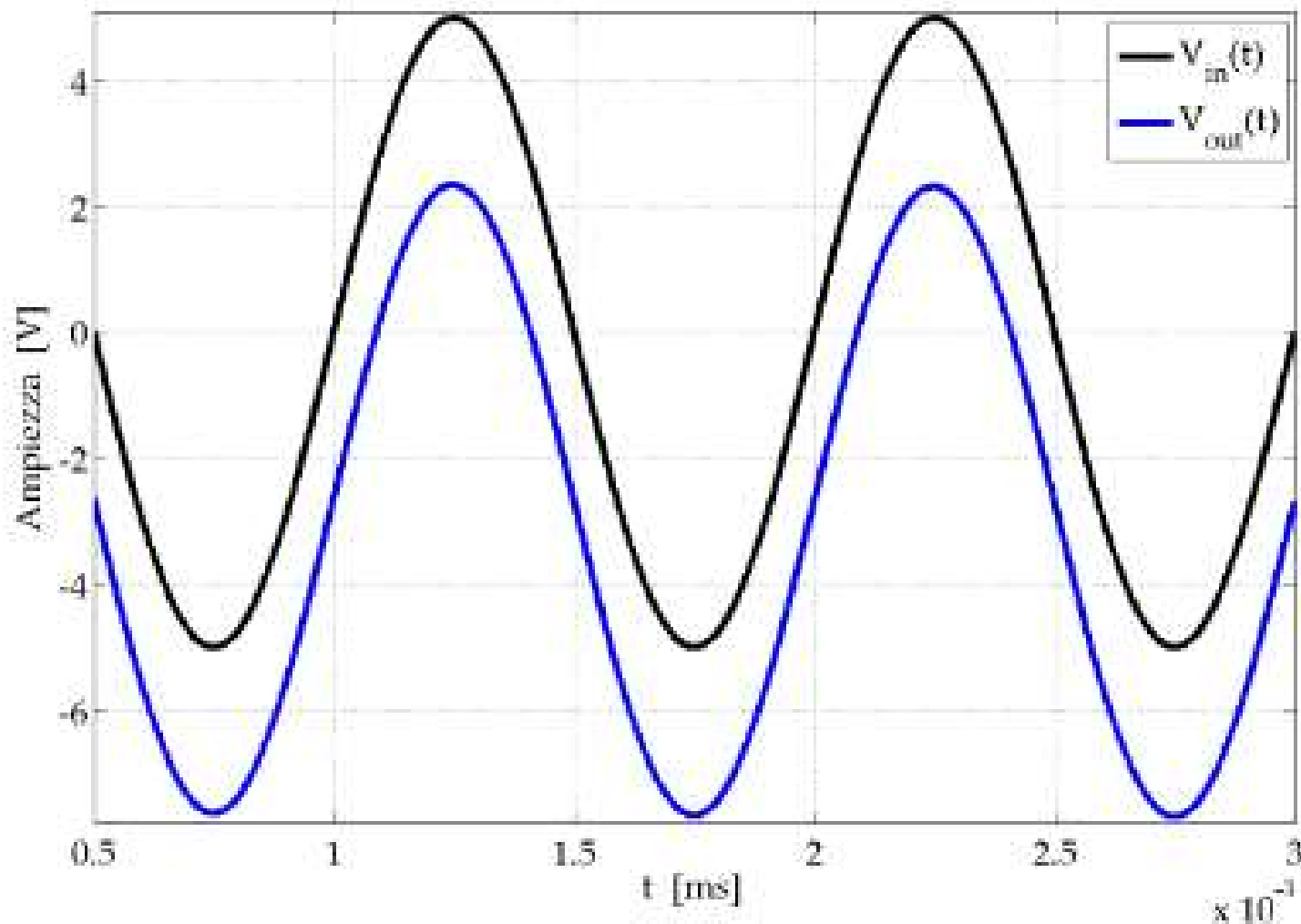


Aggancio del Massimo

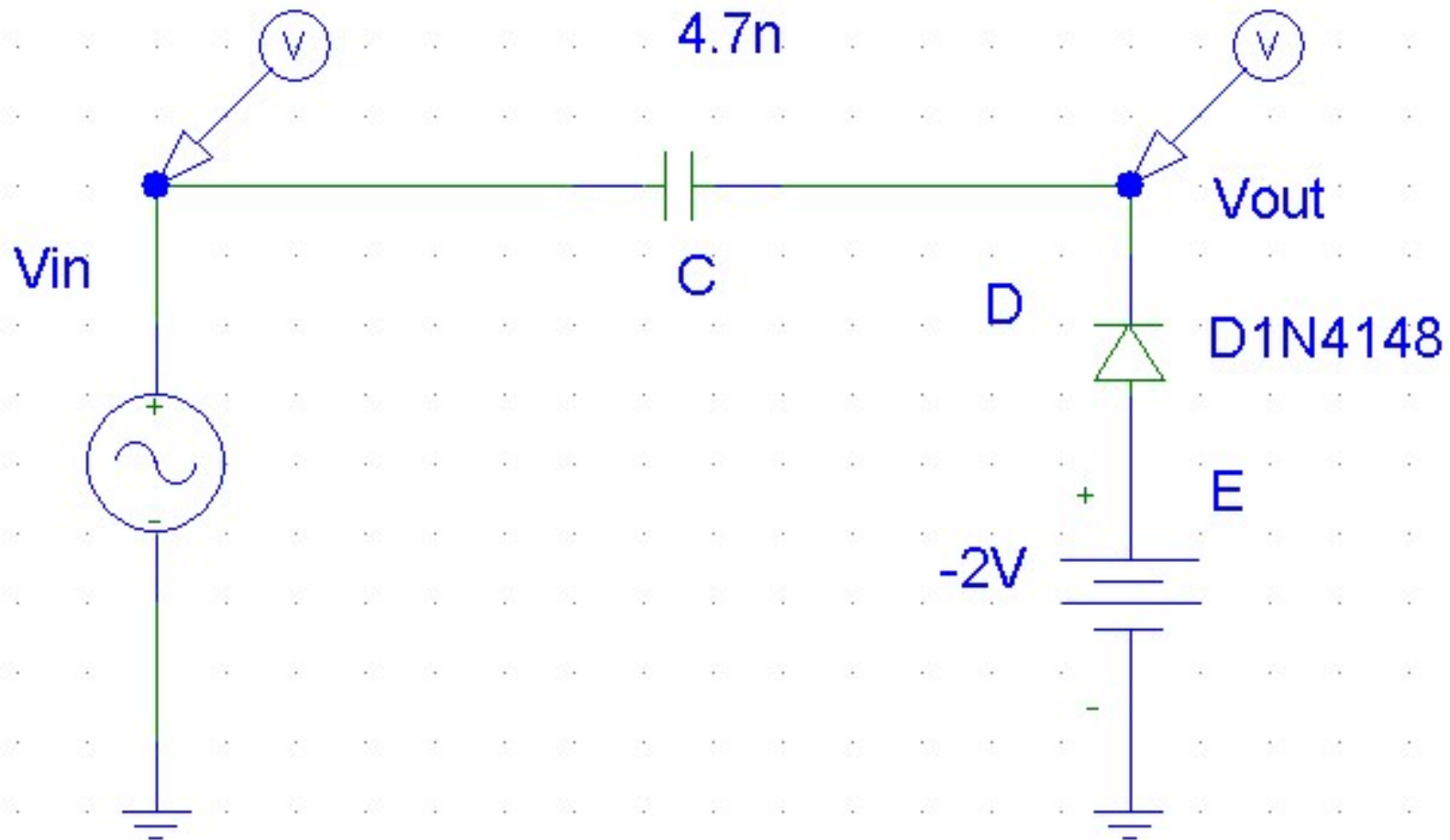
Clamping (uscita 5)



Aggancio del Massimo *Clamping* (uscita 5)

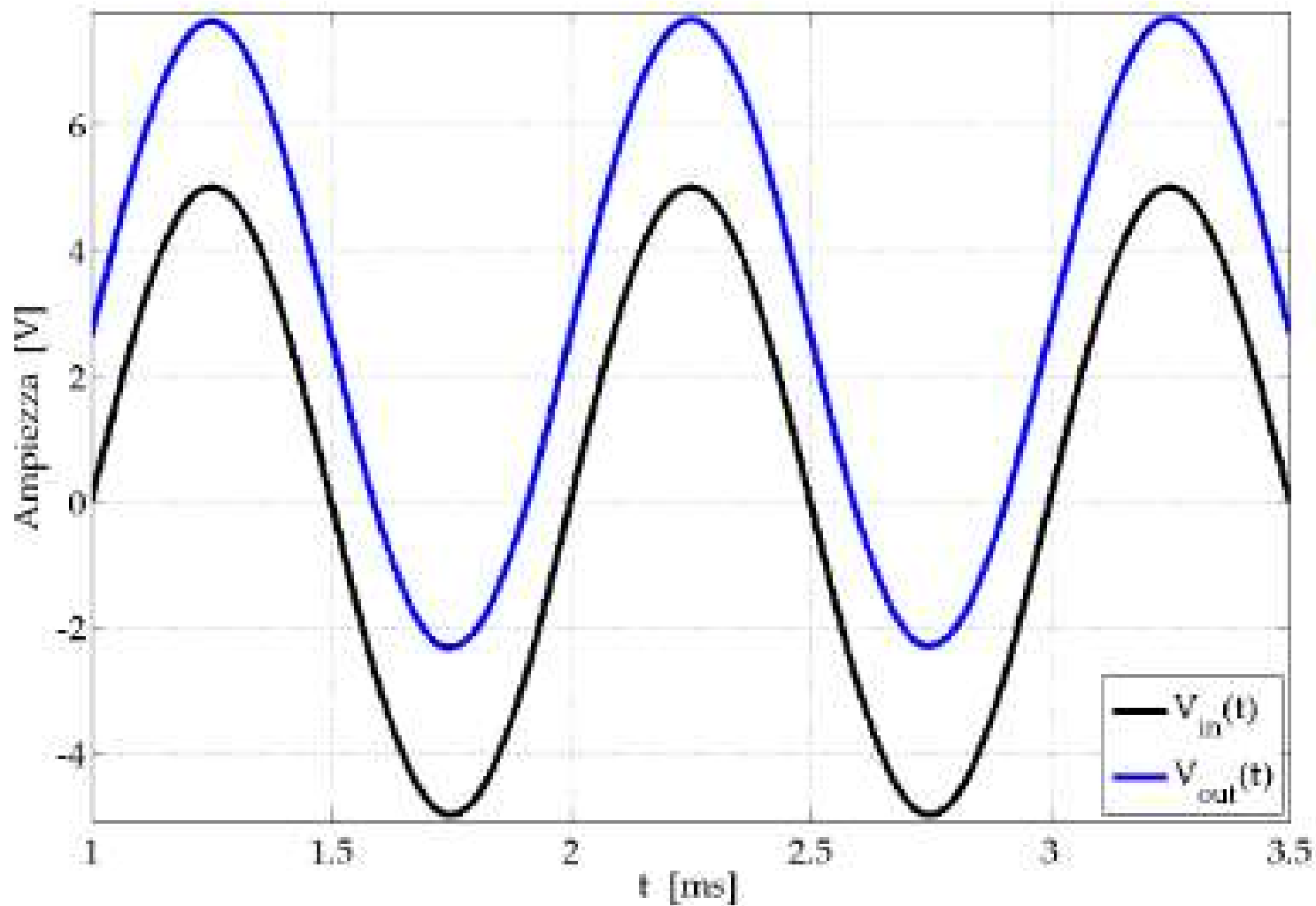


Aggancio del Minimo *Clamping* (uscita 6)

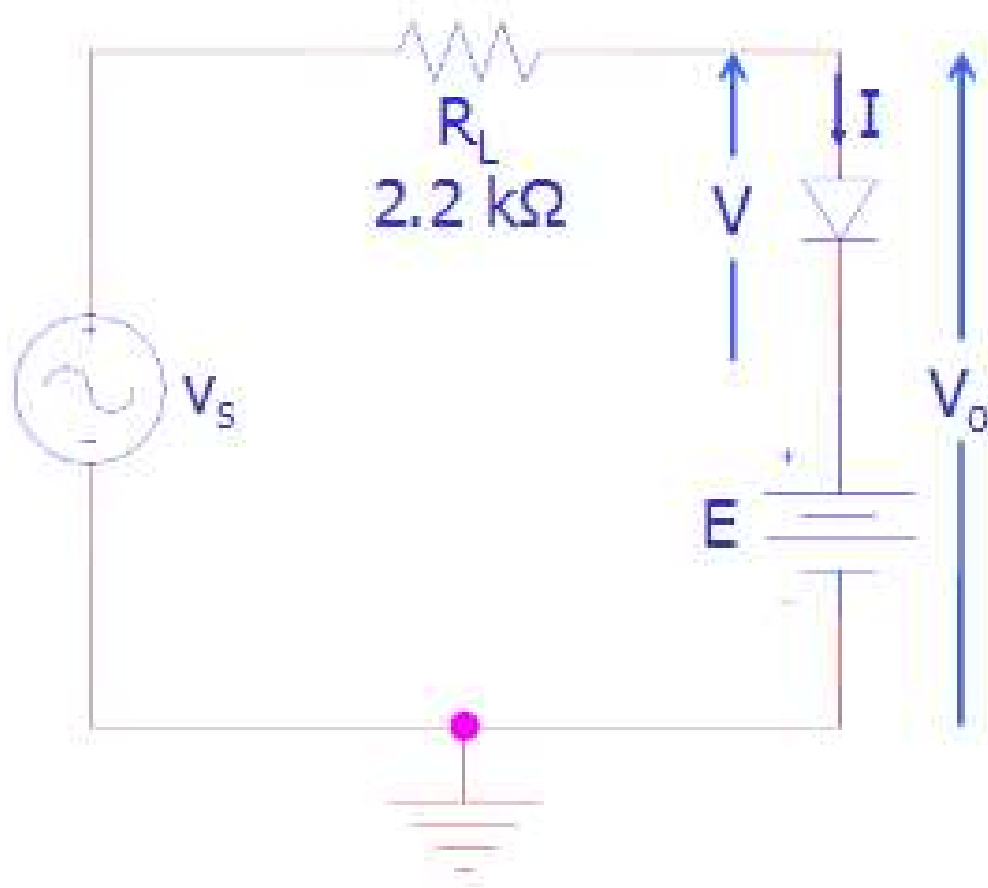


Aggancio del Minimo

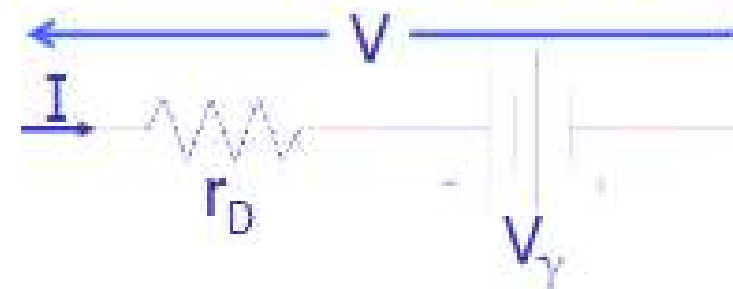
Clamping (uscita 6)



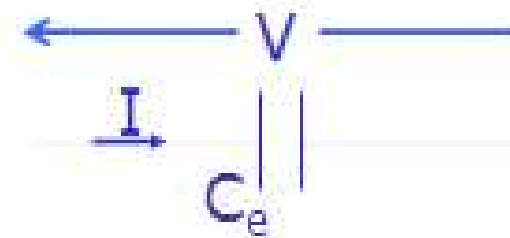
Polarizzazione e Parametri di Piccolo Segnale



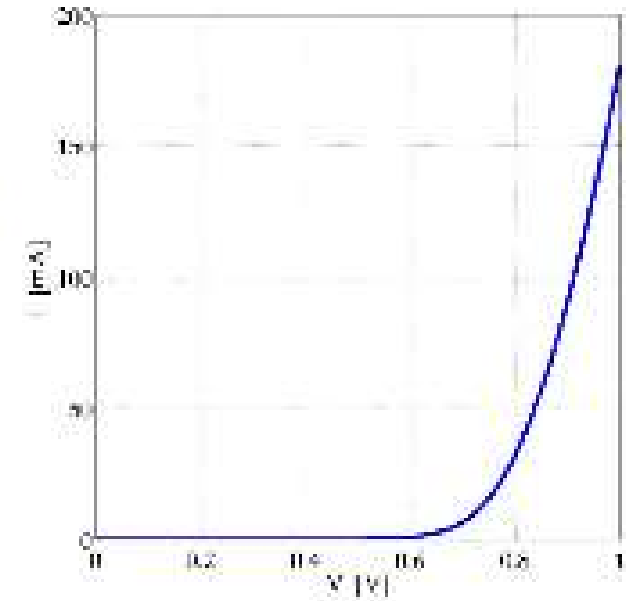
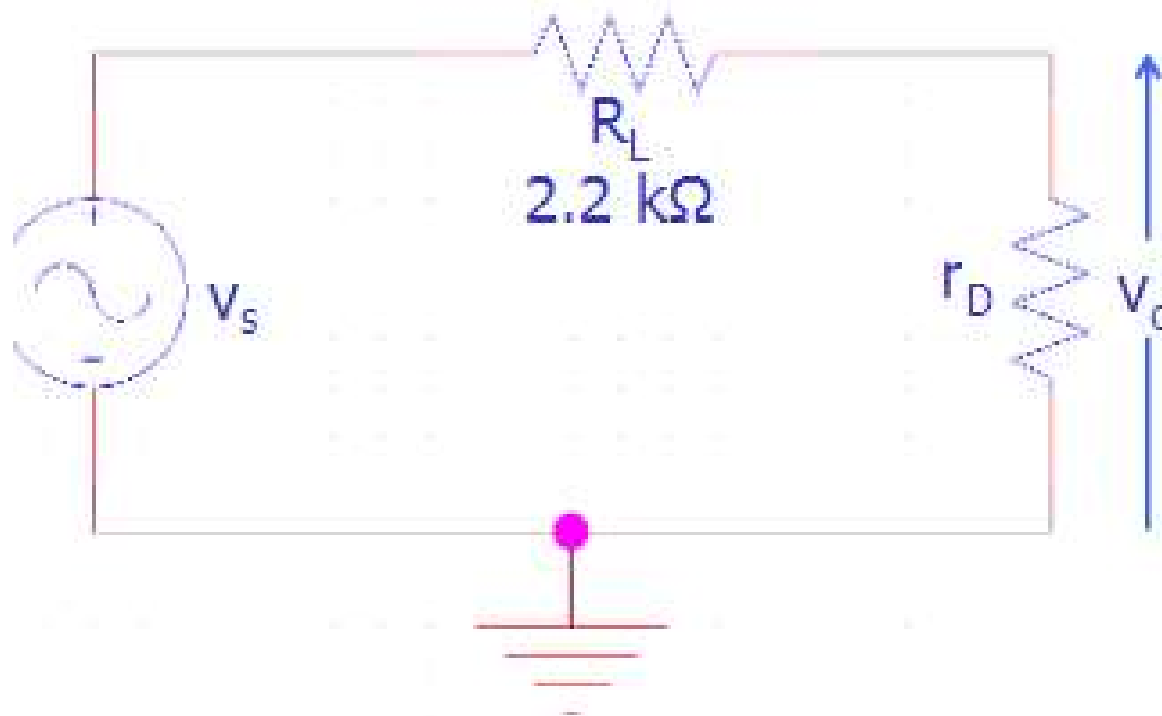
$E < 0 \text{ V} \Rightarrow$ Diodo in Diretta



$E > 0 \text{ V} \Rightarrow$ Diodo in Inversa



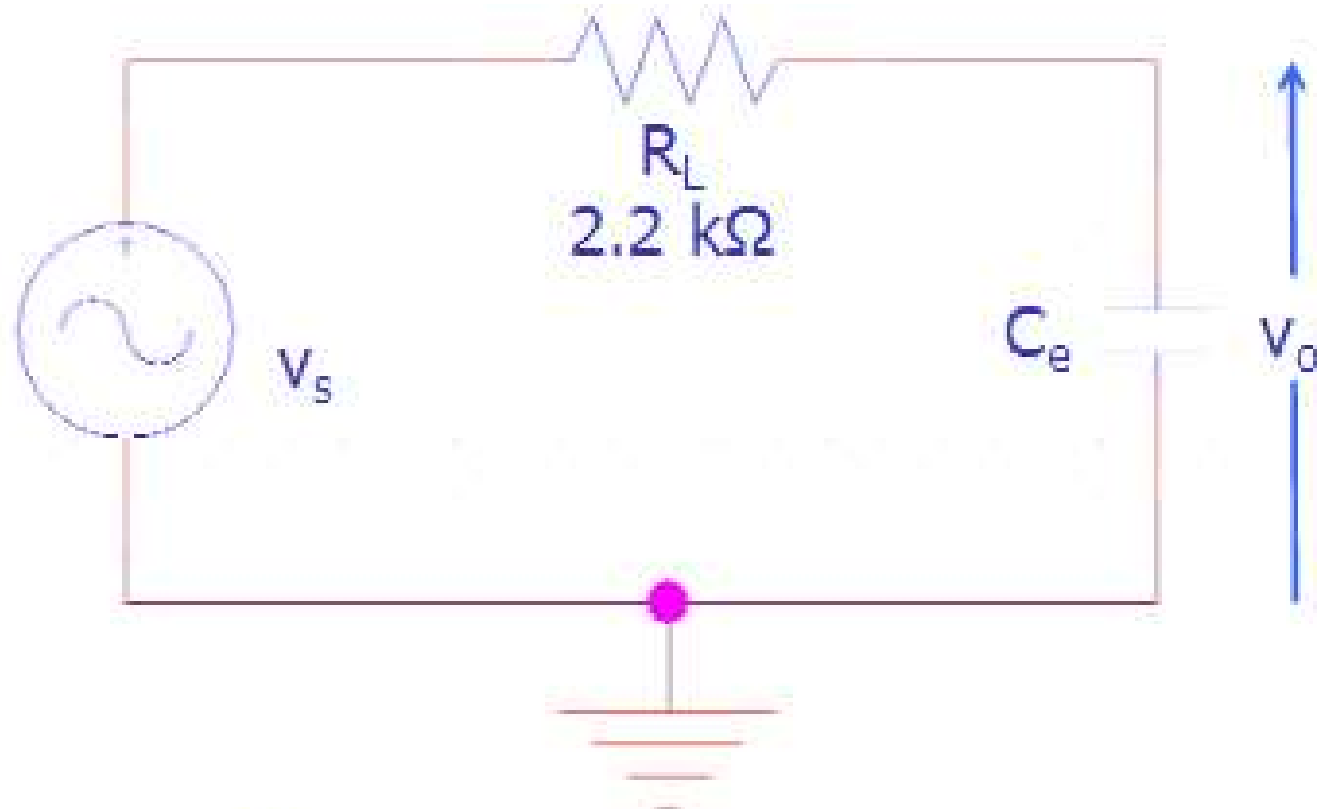
Polarizzazione Diretta ($E < 0V$)



$$r_D = \left[\frac{dI}{dV} \right]^{-1} = \frac{nV_T}{I}$$

$$V_O = V_S \frac{r_D}{r_D + R_L}$$

Polarizzazione Inversa ($E > 0V$)



$$C_e = \frac{C_0}{\left[1 + \frac{E}{V_C}\right]^{1/2}}$$

$$V_o = V_s \frac{1}{1 + j\omega C_e R_L}$$

Polarizzazione Inversa ($E > 0V$)

