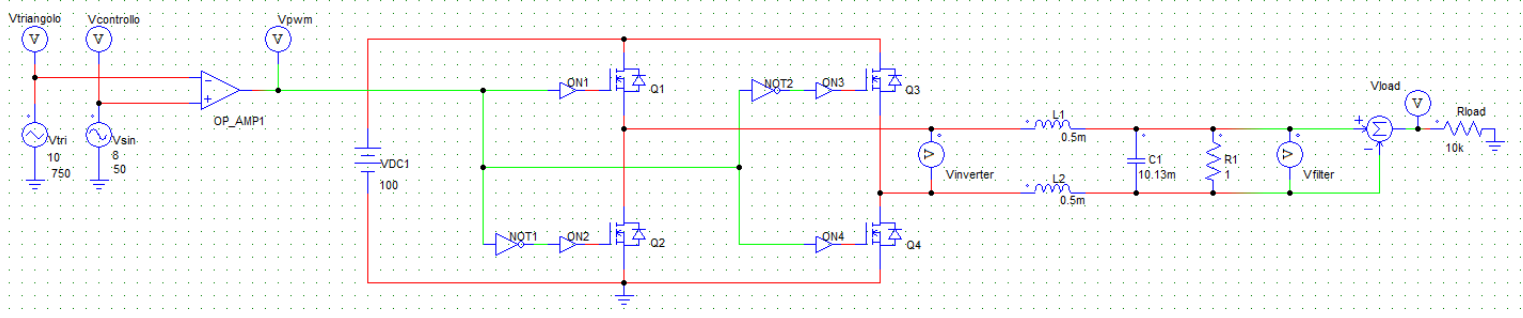


PROGETTO DI ELETTRONICA DI POTENZA di Alessandro Paghi

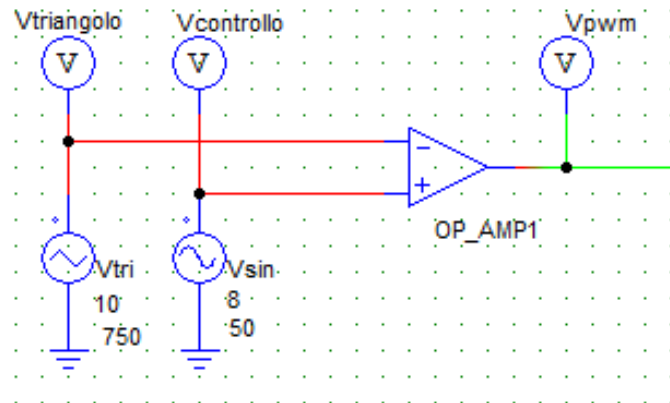
TESTO PROGETTO #10

Convertitore DC-AC 50 Hz Monofase controllo PWM bipolare.

SCHEMA CIRCUITALE



GENERAZIONE DEL SEGNALE DI CONTROLLO PWM

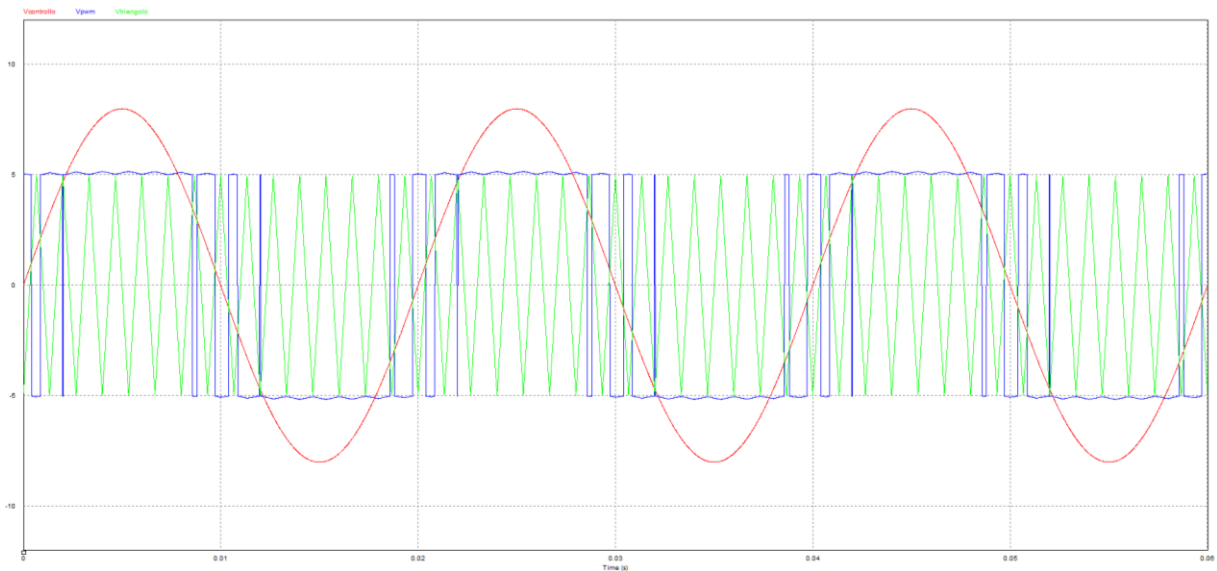


$$m_a = V_{\text{sin-picco}} / V_{\text{tri-picco}} = 0.8$$

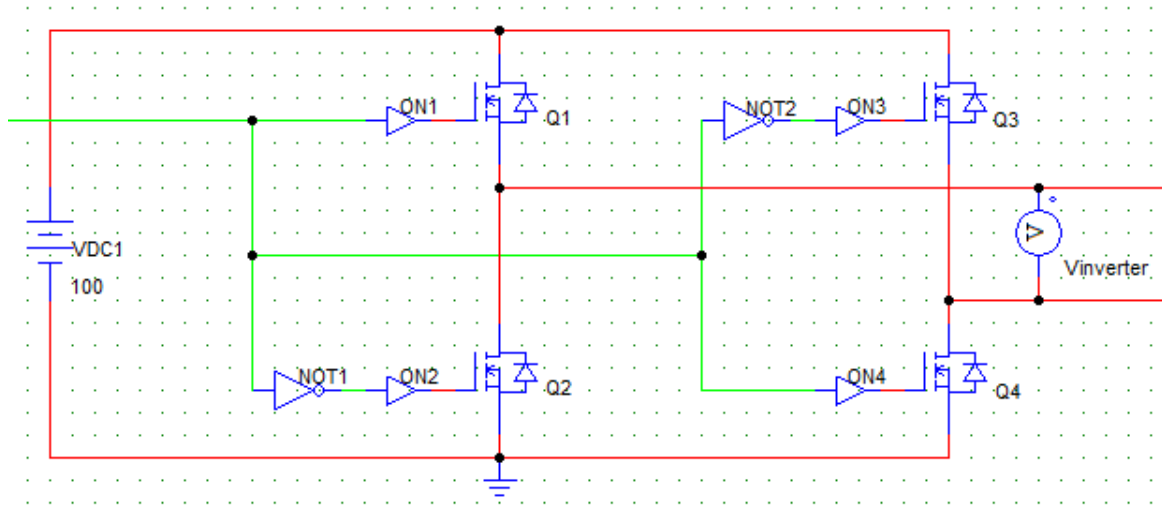
$$m_f = f_{\text{tri}} / f_{\text{sin}} = 15$$

$$f_{\text{sin}} = f_{\text{out}} = 50 \text{ Hz} \rightarrow f_{\text{tri}} = 750 \text{ Hz}$$

$$V_{\text{tri-picco}} = 10 \text{ V} \rightarrow V_{\text{sin-picco}} = 8 \text{ V}$$

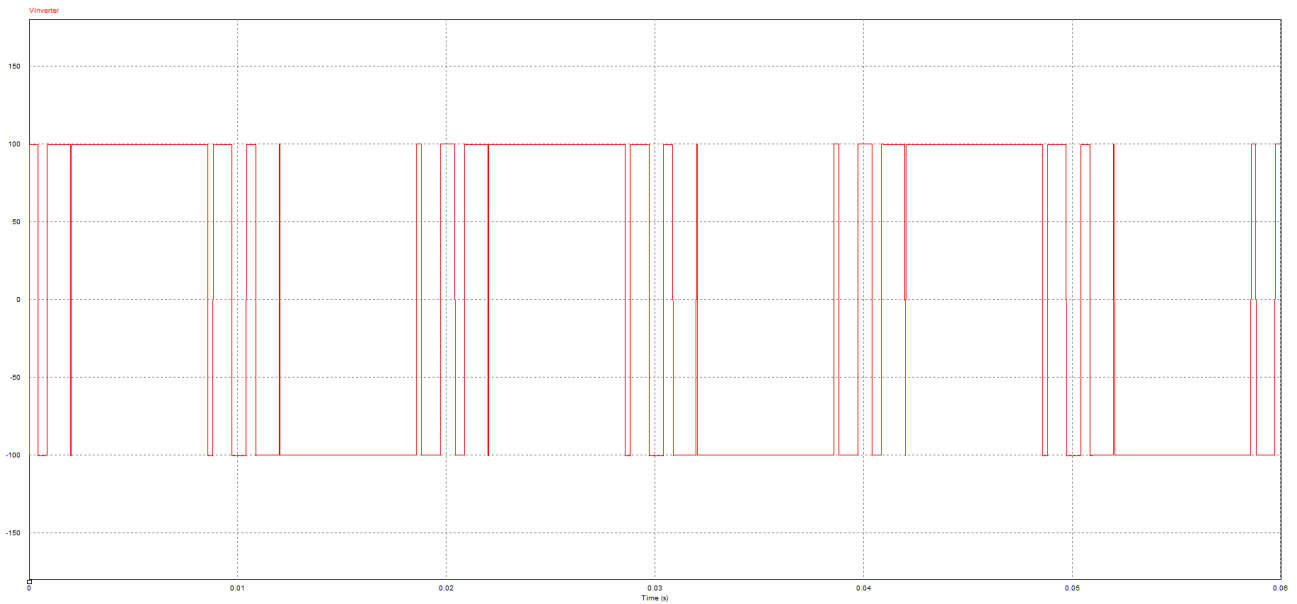


INVERTER

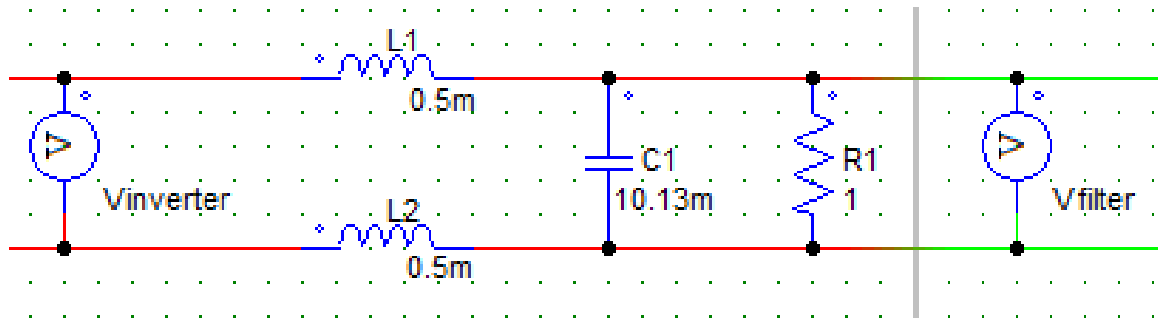


$$V_{DC1} = 100 \text{ V}$$

$$V_{INVERTER1^{\circ}ARMONICA} = m_a * V_{DC1}/2 = 40 \text{ V}$$



LOW PASS FILTER BILANCIATO



$L = 1 \text{ mH}$

$C = 10.13 \text{ mF}$

$R = 1 \text{ Ohm}$

$$V_{\text{filter}}/V_{\text{inverter}} = 1/(1+(L/R)*s+LC*s^2)$$

MATLAB BODE DIAGRAMS

