

# **Modulador e demodulador BPSK**

**Circuitos de Rádio Frequênciа - 22 de Julho de 2025**

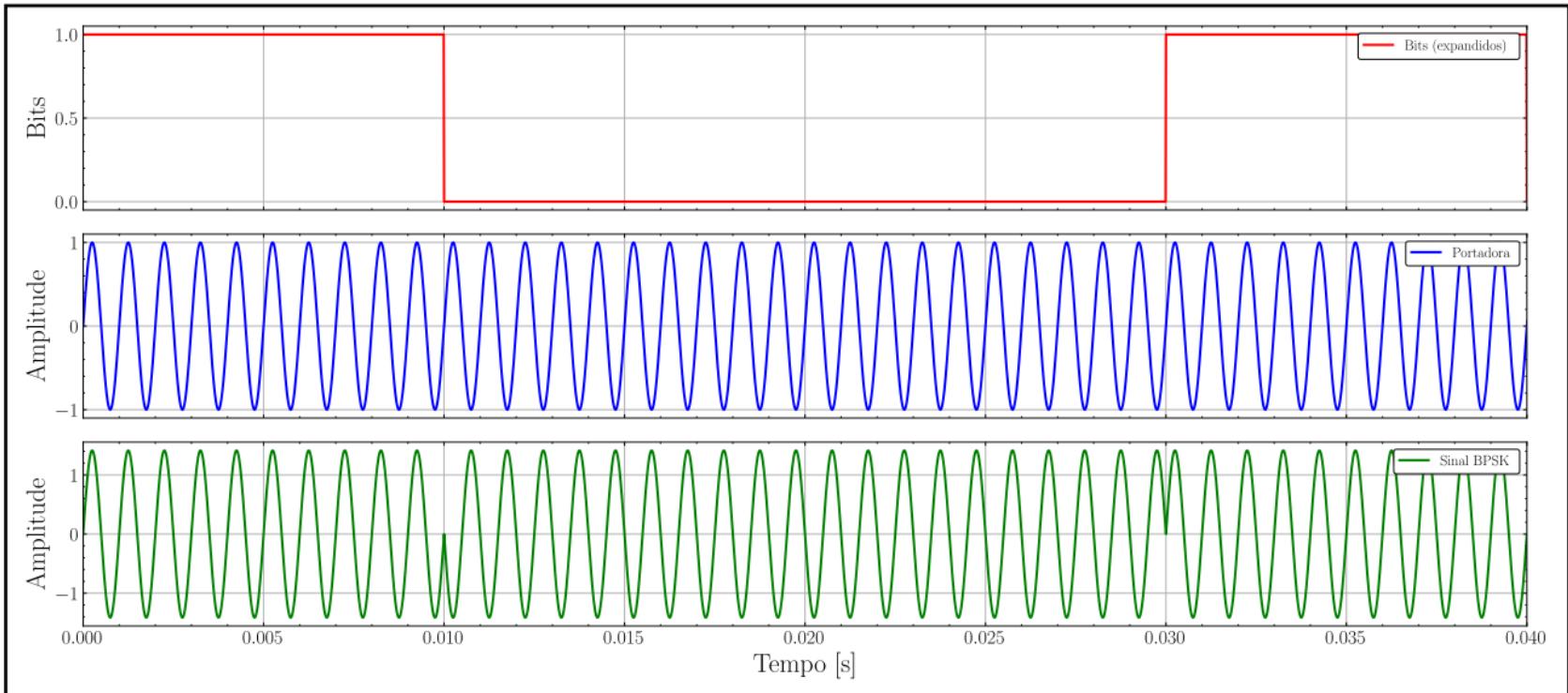
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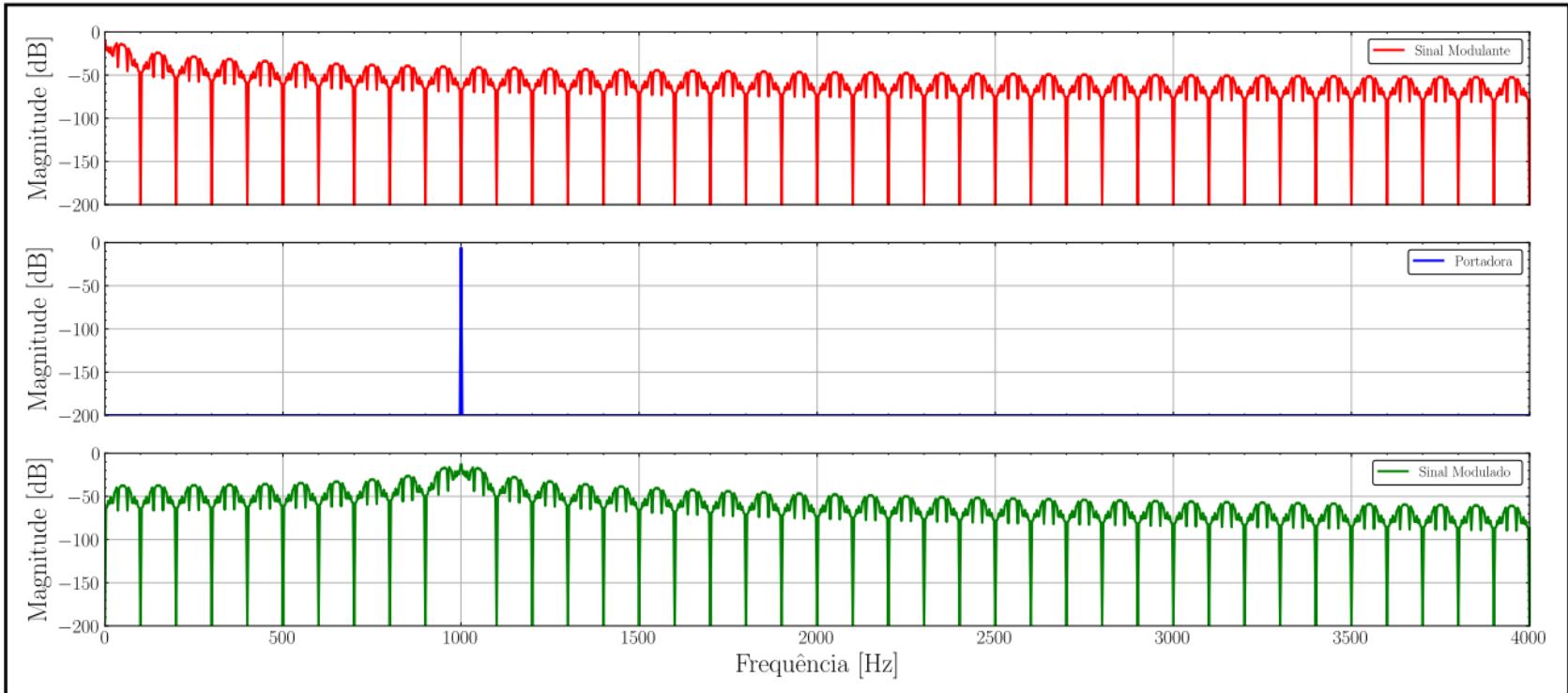
# **Sinal BPSK**

# Formato do sinal



Modulador

# FFT do sinal

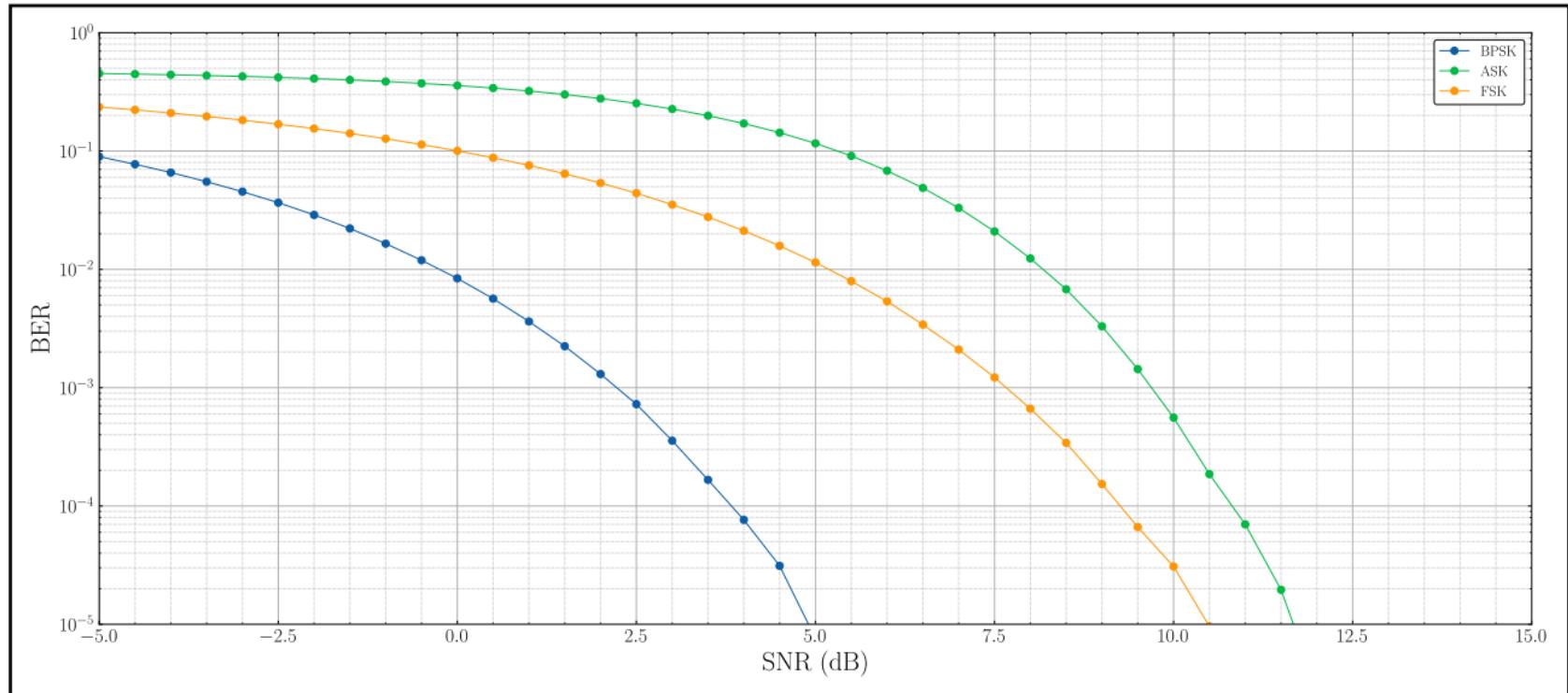


FFT do sinal

# Aplicações

- Simulação do sinal BPSK
- Simulação do demodulador
- Simulação da curva BER vs SNR

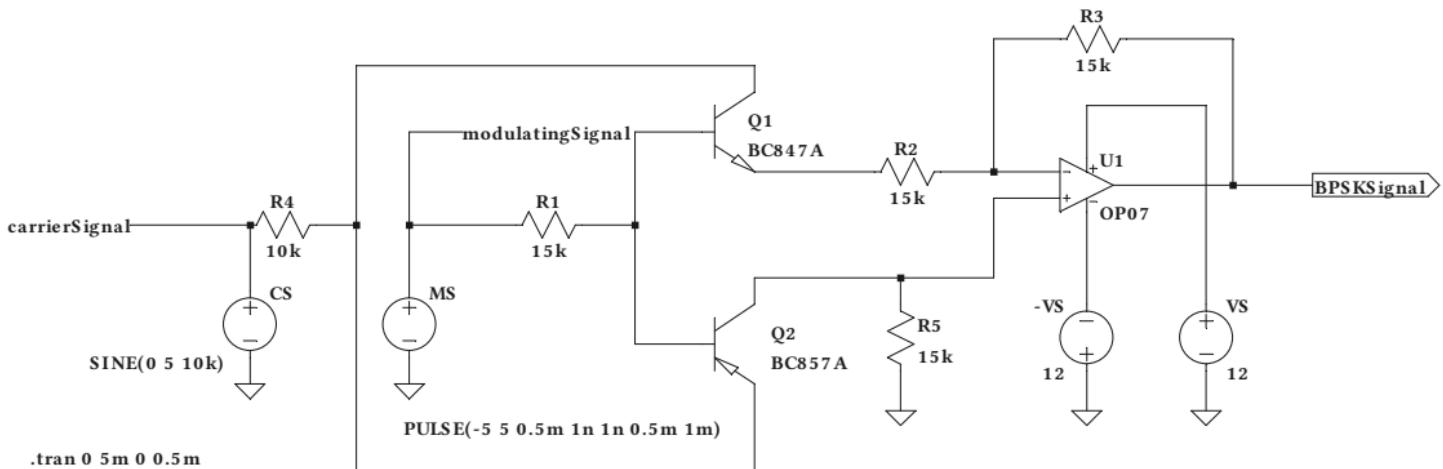
# Curva BER vs SNR



Curva BER vs SNR

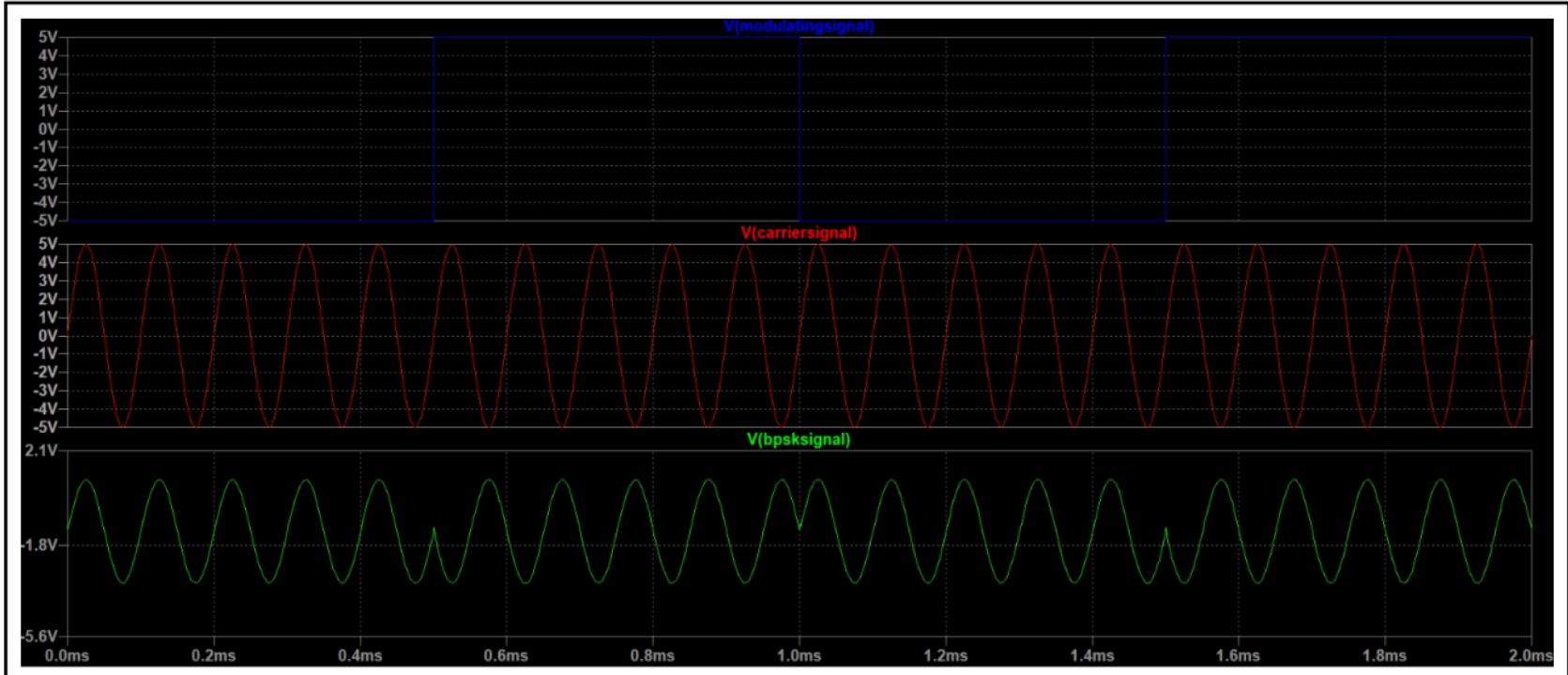
# **Modulador**

# Esquemático do modulador



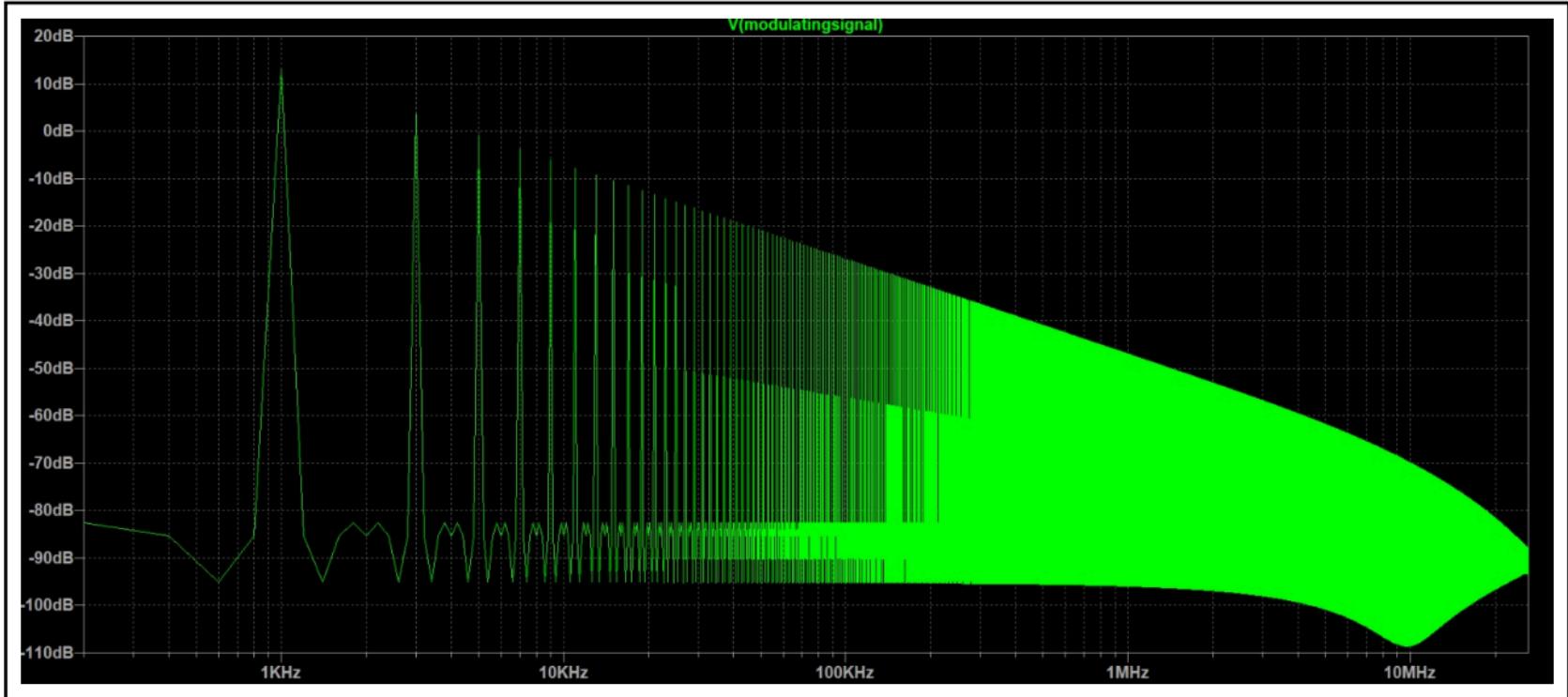
Circuito Modulador

# Simulação do modulador



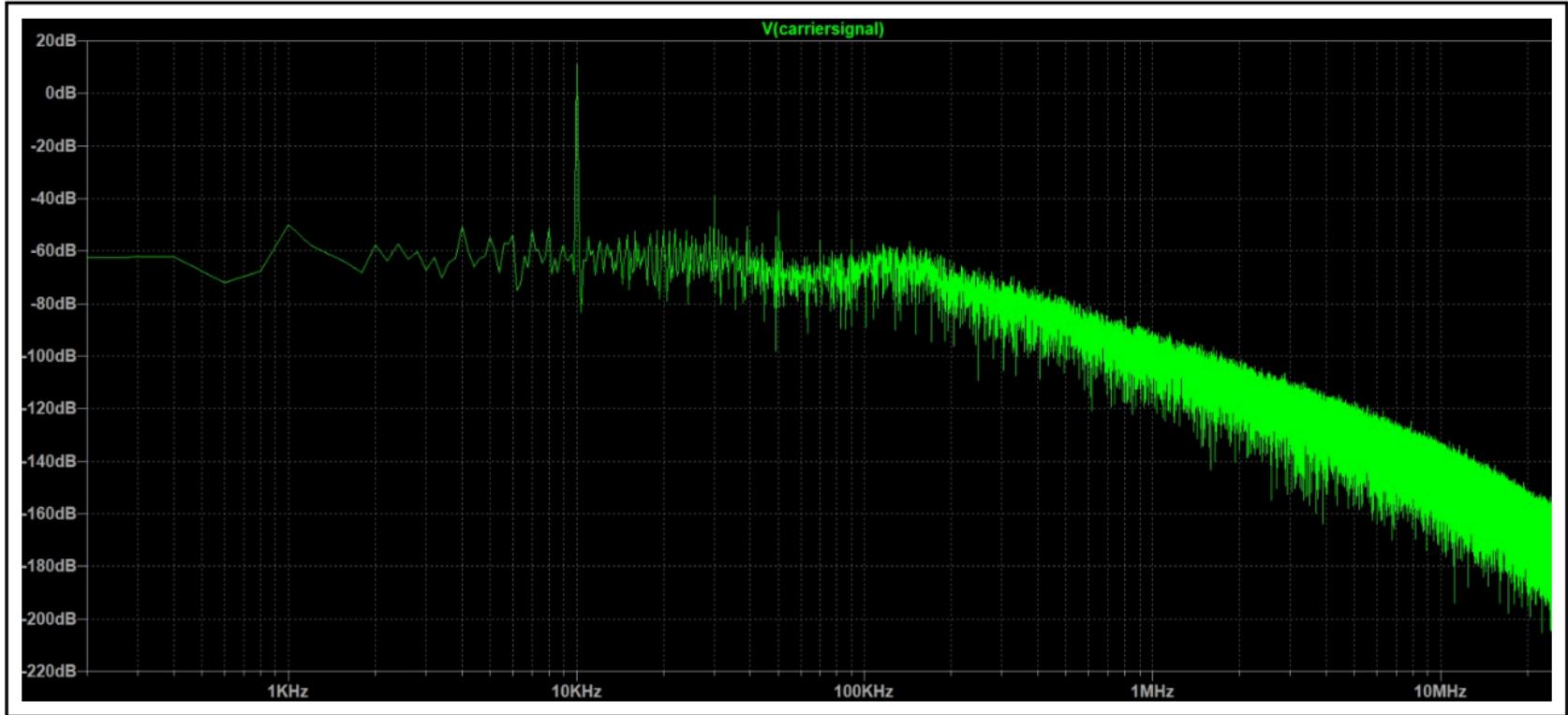
Sinal Modulado no tempo

# FFT Modulante



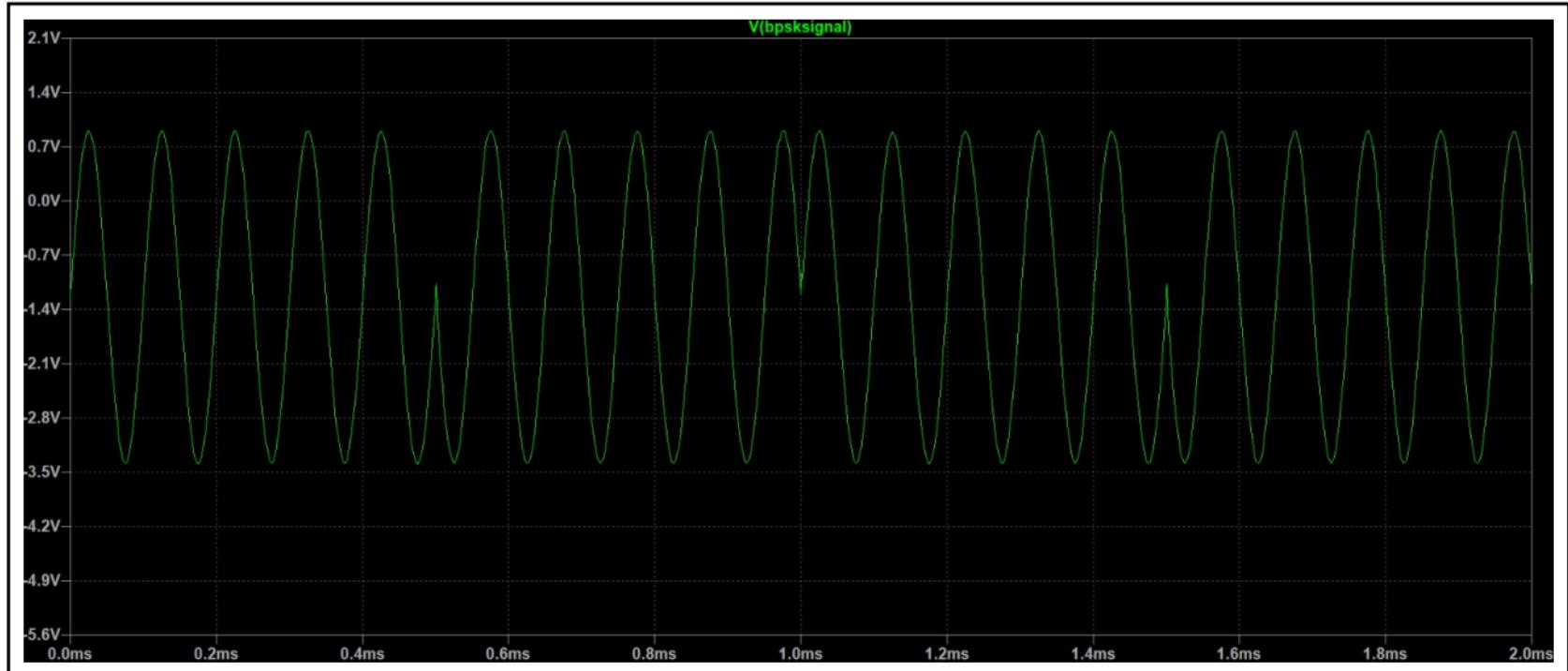
FFT modulante

# FFT Portadora



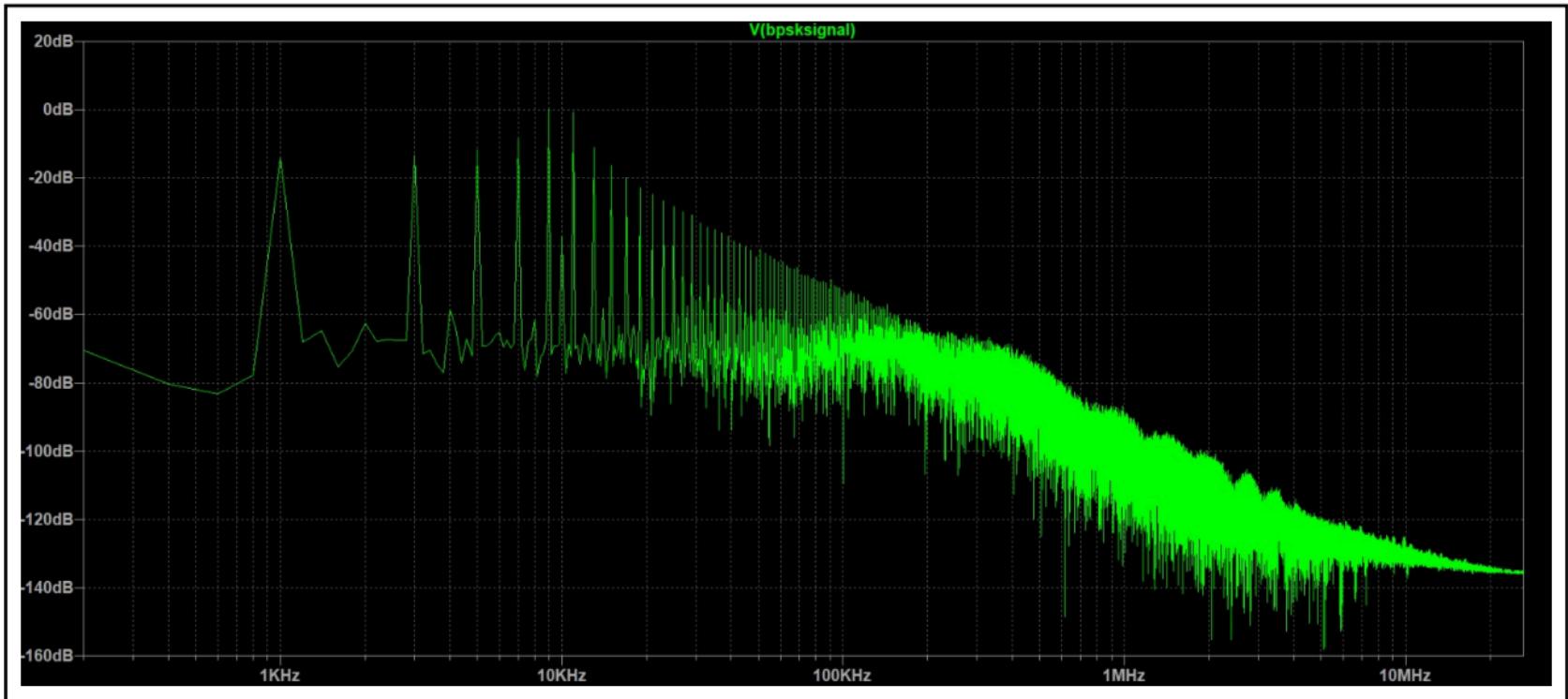
FFT portadora

# Sinal modulado



Sinal modulado

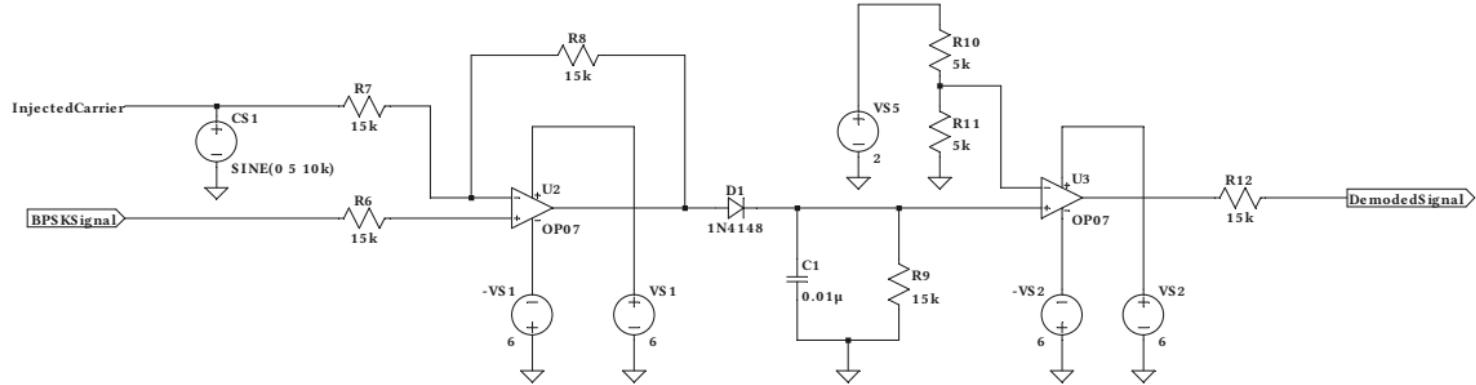
# FFT Sinal Modulado



FFT sinal modulado

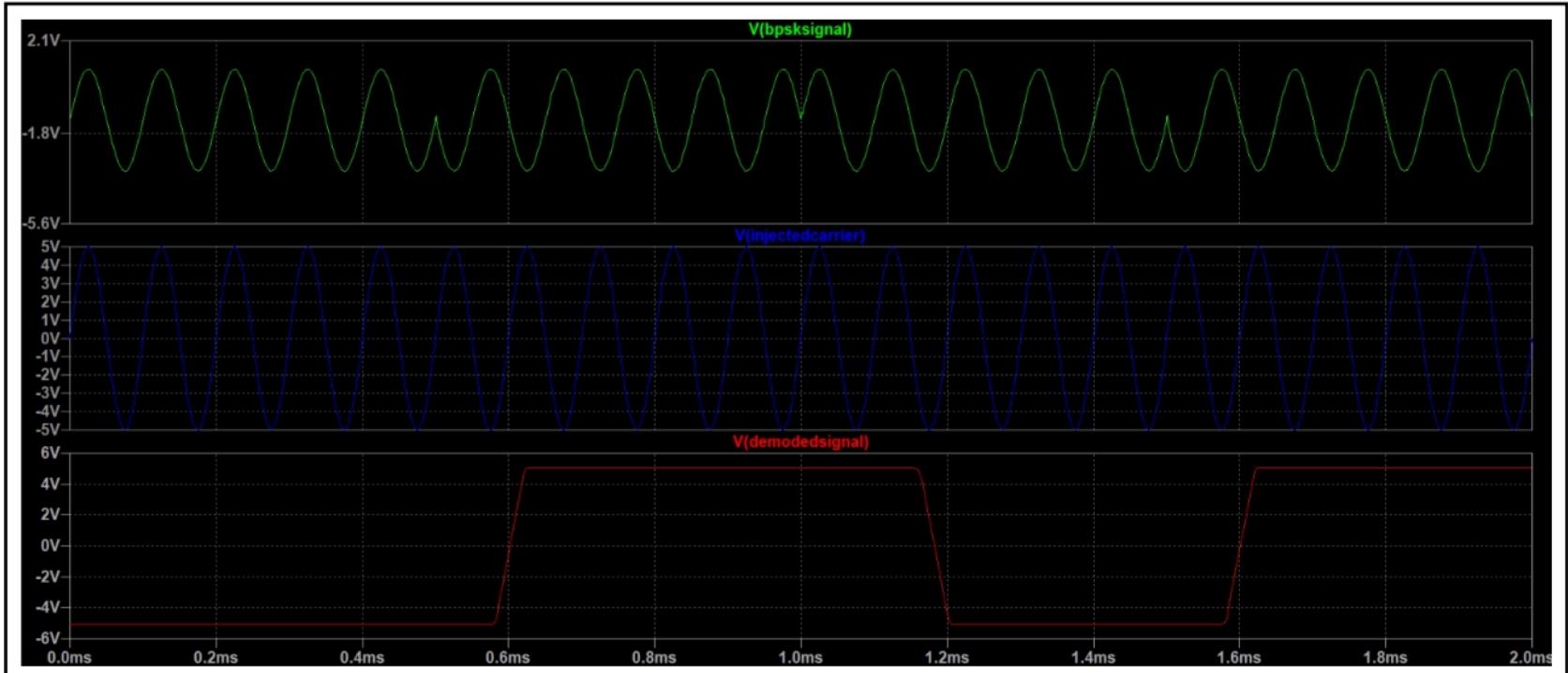
# **Demodulador**

# Esquemático do demodulador



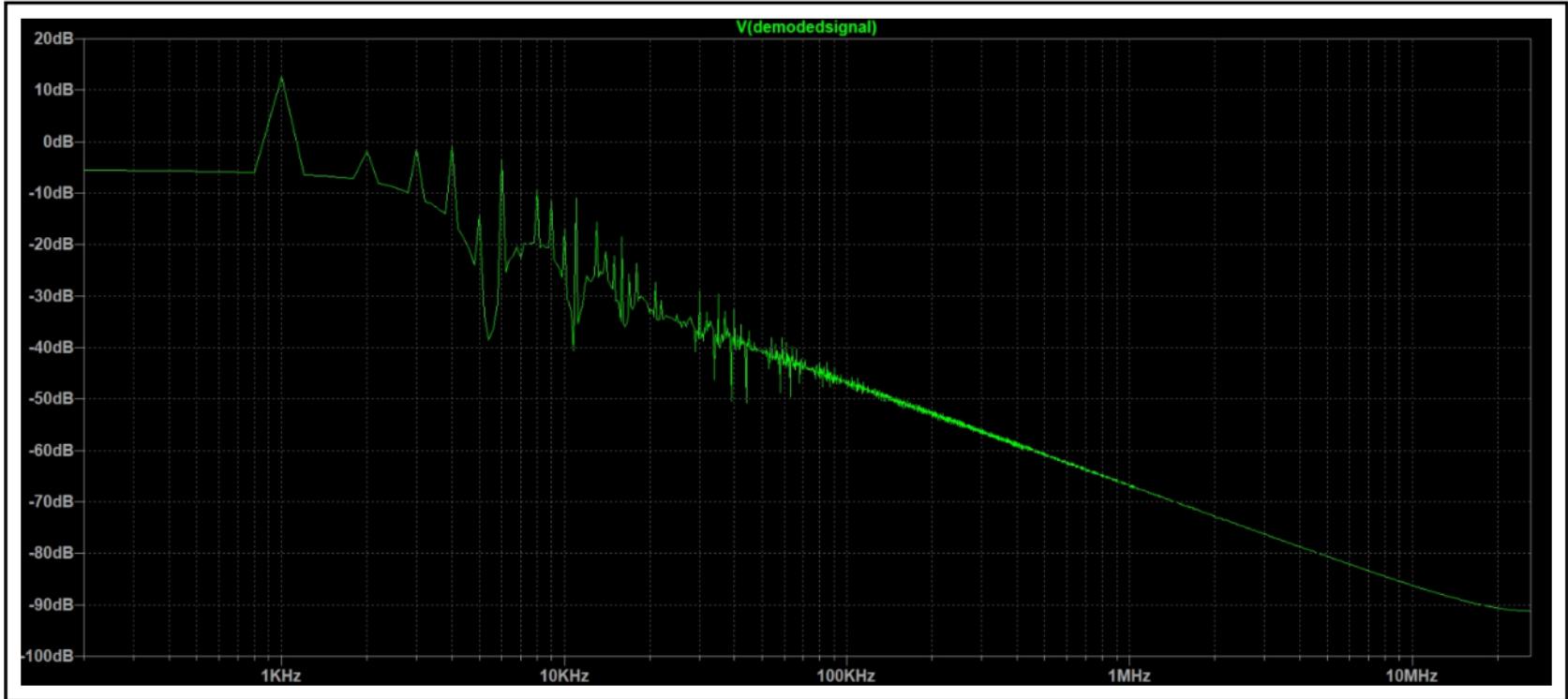
Circuito Demodulador

# Simulação do demodulador



Sinal demodulado no tempo

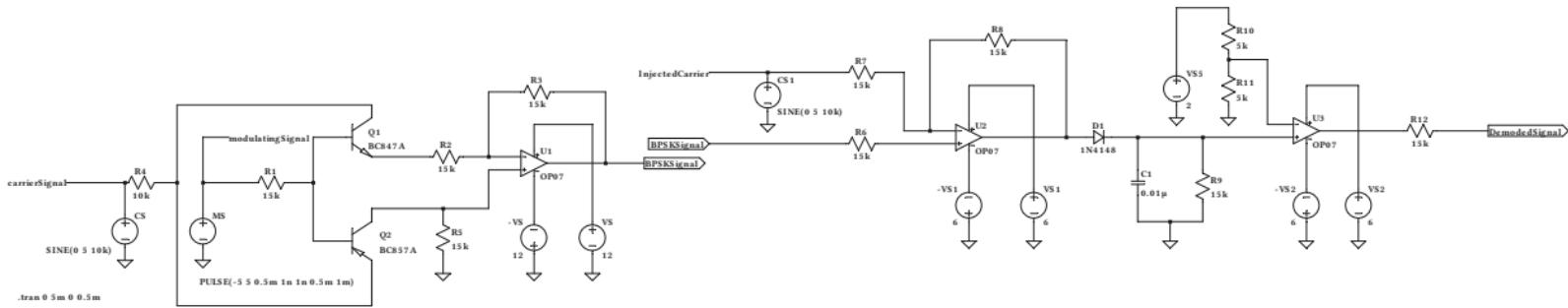
# FFT Demodulado



FFT sinal demodulado

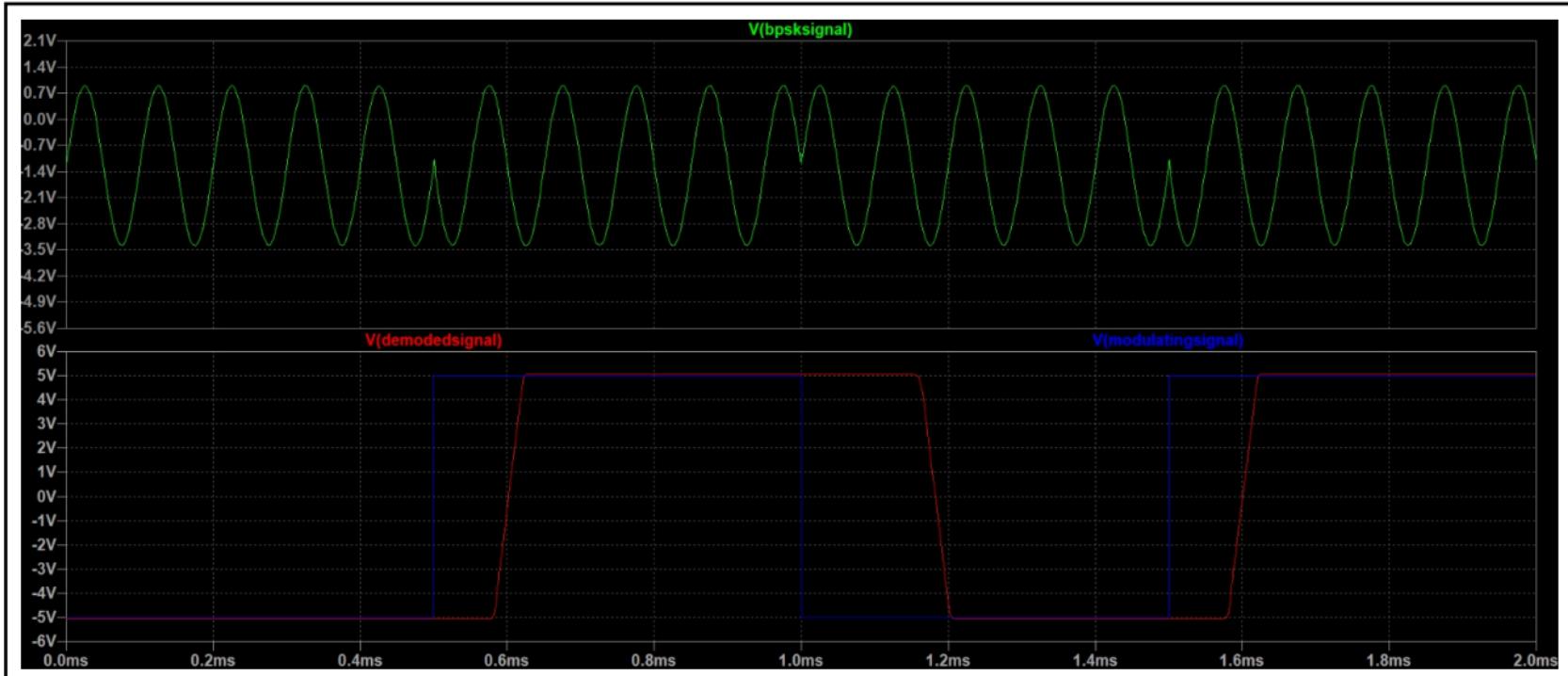
# Cadeia de modulação e demodulação

# Esquemático da cadeia



## Modulador e Demodulador

# Sinal modulado vs sinal demodulado



Comparação sinal modulante e sinal demodulado

# Conclusão

# Conclusão

- colocar conclusão aqui