

Introduction to QAM and OFDM

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Amplitude Modulation Model

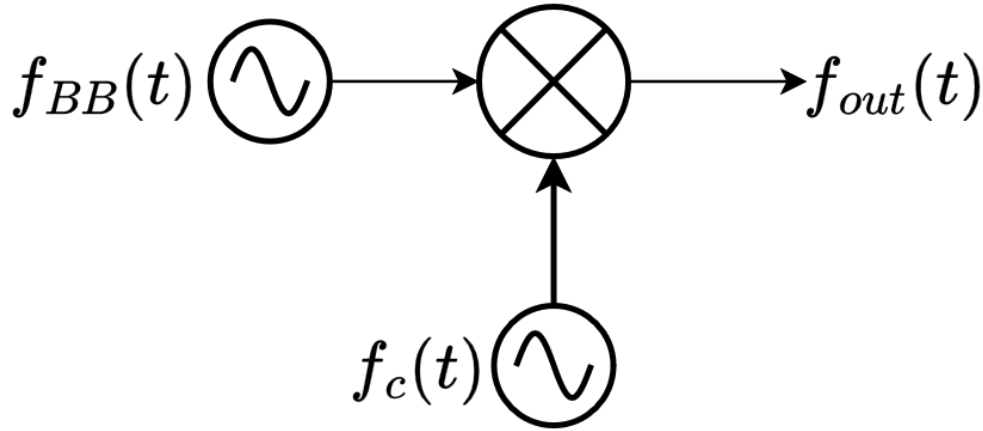


Figure 1: Symbol model of amplitude modulation

- $f_{BB}(t)$: Base-band Signal
(low frequency user input)
- $f_c(t)$: Carrier Signal
(high frequency carrier)

$$f_{out}(t) = f_{BB}(t) \cdot f_c(t)$$

Equation 1: Mathematical model of amplitude modulation

Amplitude Modulation - Time Domain Example

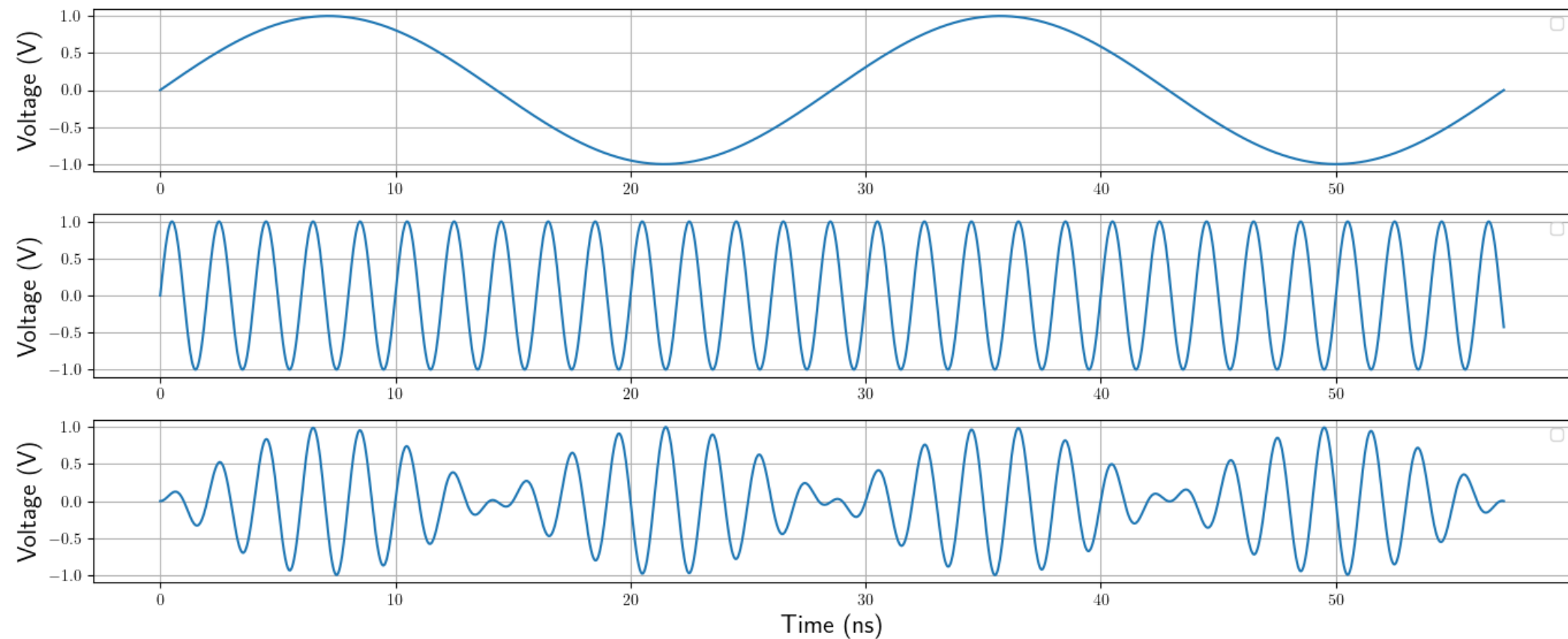


Figure 2: AM Time Domain Example

$$f_{BB}(t) = 45 \text{ MHz Sine Tone}$$

$$f_c(t) = 500 \text{ MHz Sine Tone}$$