Signals and Systems
Lab – 3

Name : Emre Nedim Hepsağ   **Number :** 250206012

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Figure 1

In this figure, we see the affect of modulation factor on conventional AM signal. By looking this graph, we can say that modulation factor directly affects the rate of message signal amplitude to the carrier amplitude. If we have the modulation factor over 1, we observe overmodulation or phase reversal or envelope distortion which is not desired. It is supposed to be less than unity.
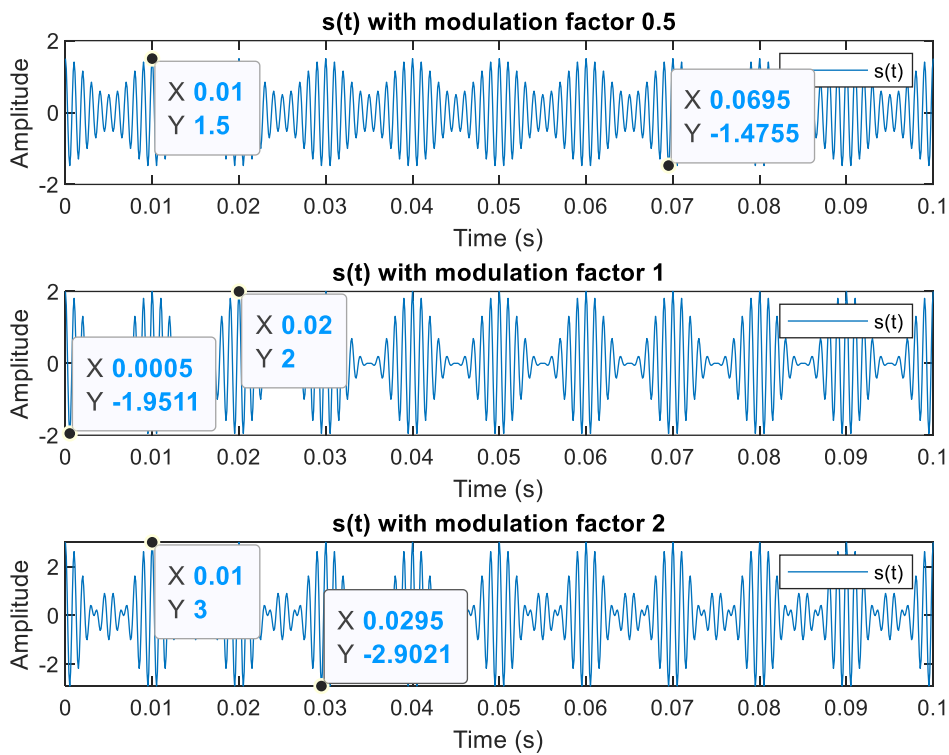
Figure 2

In this figure, we directly see the frequency response of message and carrier signal. Thus, we see peak at 100Hz at the first and 1000Hz at the second graph which are frequencies of the signals. In the last graph, we see the conventional AM signal, middle one is carrier signal, and the small ones are the message signals. Because of that, the bandwidth of modulated signal is double of message signal.
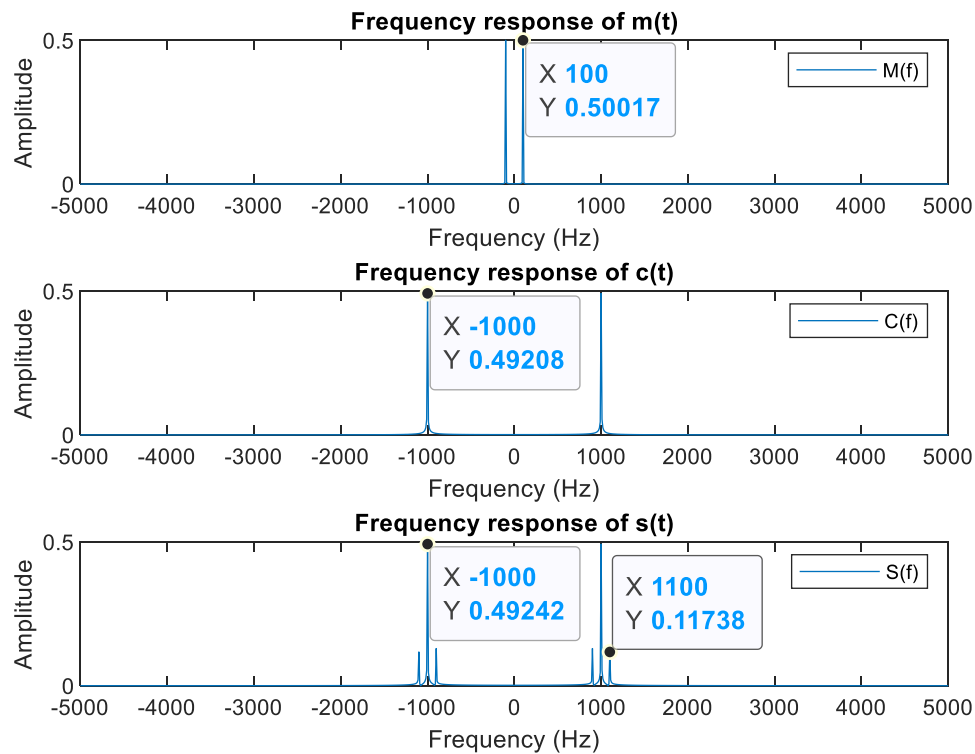
Figure 3

In this figure, we see that our demodulation process works well. In the first graph, we obtain the signal almost perfectly. However, in the second graph, because of envelope distortion, we obtained distorted message signal as a result.