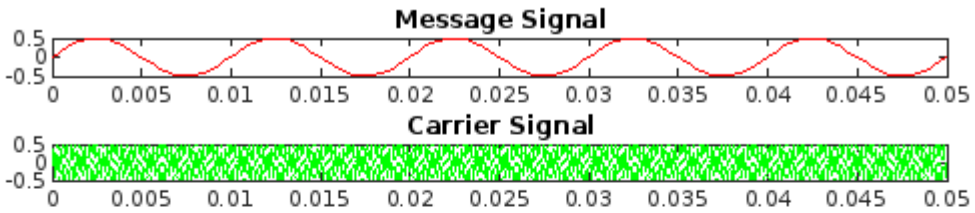
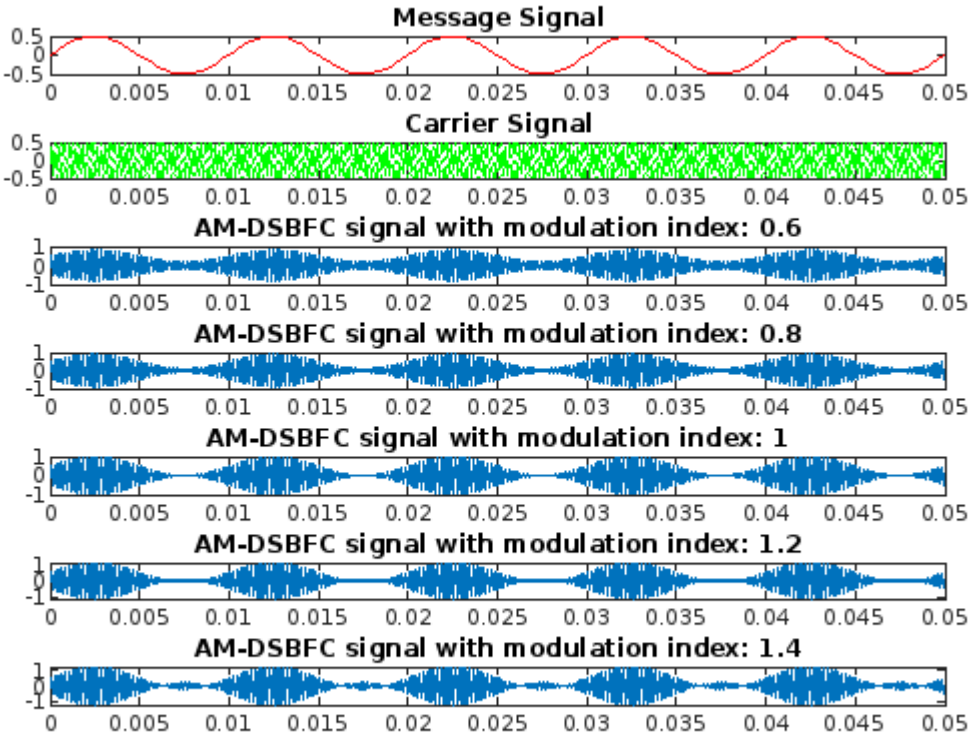
Message signal and carrier signal

```
Am = 0.5;
fm = 100;
Tm = 1/fm;
t_msg = 0:Tm/25:5*Tm;
msg_sgnl =  Am*sin(2*pi*fm*t_msg);

Ac = 0.5;
fc = 5000;
Tc = 1/fc;
t_car = 0:Tc/25:5*Tm;
car_sgnl = Ac*sin(2*pi*fc*t_car);

subplot(7,1,1)
plot(t_msg, msg_sgnl, 'r-')
title('Message Signal');

subplot(7,1,2)
plot(t_car, car_sgnl, ['g-.'])
title('Carrier Signal');
```



AMDSBFC signal => carrier_signal*(1+modulation_index*sin(2*pi*frequency*time)

```
plot_num = 3;
for mod_inx = 0.6:0.2:1.4
    Y_AM_DSBFC = Ac*sin(2*pi*fc*t_car) .* (1+mod_inx*sin(2*pi*fm*t_car));
subplot (7,1,plot_num)
plot(t_car, Y_AM_DSBFC)
title(['AM-DSBFC signal with modulation index: ', num2str(mod_inx)]);
plot_num = plot_num + 1;
end
```



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