

```

elements(1)=amplifier('Name','LNA','Gain',25,'NF',1.5,'OIP3',26);
Fcenter=245.75e6;
Bwpass=5e6;
elements(2)=rffilter('Name','RF_Filter','ResponseType','Bandpass',...
    'FilterType','Butterworth','FilterOrder',6,....
    'PassbandAttenuation',2,....
    'Implementation','Transfer function',...
    'PassbandFrequency',[Fcenter-Bwpass/2 Fcenter+Bwpass/2]);
elements(3)=modulator('Name','Demod','Gain',-3,'NF',7,'OIP3',15,...,
    'LO',214e6,'ConverterType','Down');
Fcenter=31.75e6;
Bwpass=5e6;
elements(4)=rffilter('ResponseType','Bandpass',.....
    'FilterType','Butterworth','FilterOrder',6,....
    'PassbandFrequency',[Fcenter-Bwpass/2 ...
        Fcenter+Bwpass/2],.....
    'Name','RF_Filter');
elements(5)=amplifier('Name','LNA','Gain',20,'NF',1.5,'OIP3',26);
elements(6)=rffilter('Name','RF_Filter','ResponseType','Bandpass',...
    'FilterType','Chebyshev','FilterOrder',4,....
    'PassbandAttenuation',2,....
    'Implementation','Transfer function',...
    'PassbandFrequency',[Fcenter-Bwpass/2 Fcenter+Bwpass/2]);
elements(7)=amplifier('Name','LNA','Gain',30,'NF',1.5,'OIP3',26);
elements(8)=rfelement('Name','LNa','Gain',0,'NF',0,'OIP3',inf);
superhet=rfbudget('Elements',elements,'InputFrequency',245.75e6,....
    'AvailableInputPower',-121,'SignalBandwidth',5e6);
rfplot(superhet,'GainT')
view(90,0)
rfplot(superhet,'NF')
view(90,0)
show(superhet);

```