Special Problem II.B-10

You are designing a microwave receiver with an RF band from 10-11 GHz. You have decided to use an IF of 2 GHz.

a) Determine the Local Oscillator frequencies required to tune to any signal within the RF bandwidth, for both high-side and low-side tuning.

b) Determine the percentage bandwidth required for each LO tuning option.

c) Determine the image bandwidth for each LO tuning option.

d) Determine for each LO tuning option the RF frequency bands where input signals will produce a third order product at the IF of 2 GHz.