30/10/13
Lec 36

Phase Noise

1) It should look like an osc.
2) mixer action from feed C-S-t output

SSB Phase Noise

$$ L (\Delta f) = 10 \log \left( \frac{P_{in} (f_0 + \Delta f)}{P_0} \right) $$

dBc/Hz

Frequency response of RLC tank

Effects of PN

1) Reciprocal Mismatch

Lo AFC $\uparrow$ $\rightarrow$ $\uparrow$ $\uparrow$

Lo AFC $\uparrow$ $\rightarrow$ $\uparrow$ $\uparrow$

f

f

f

f
Powerful Tx could drawn out Rx signal in presence of PN

OPDM

$\text{LTI Analysis of Novi in Osc}$


\[ \overline{v_n} = 4kRT \Delta f \]