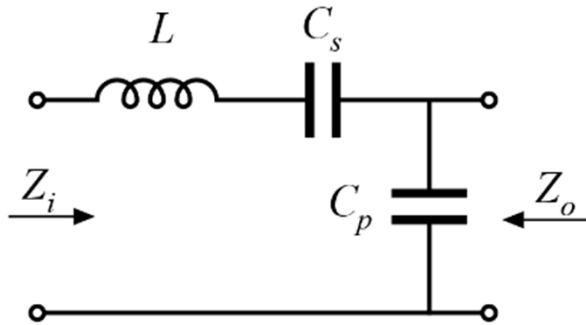
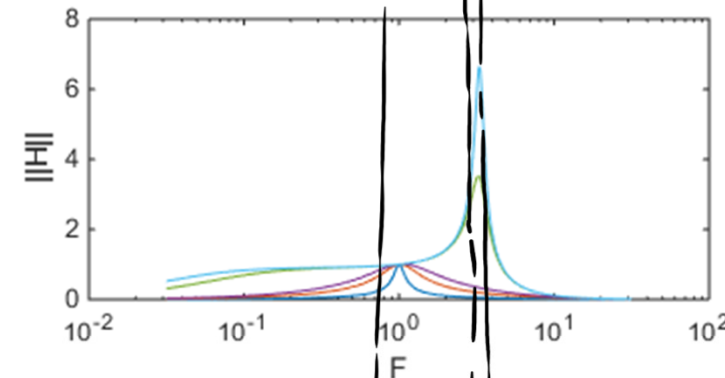
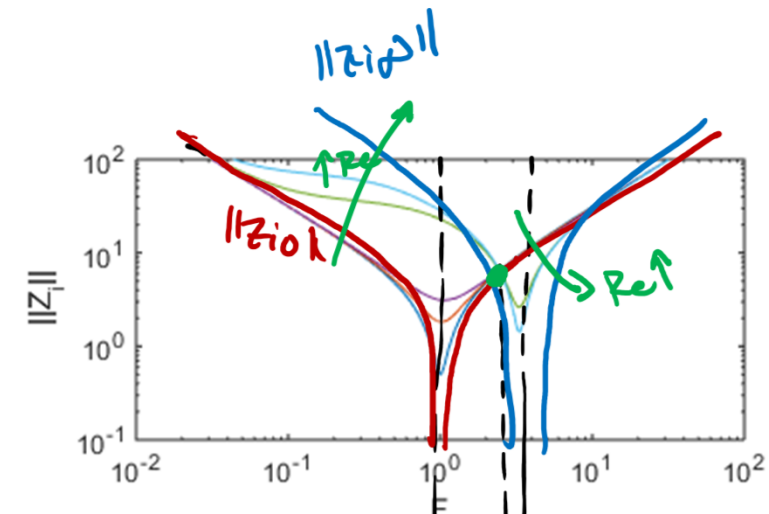


# LCC



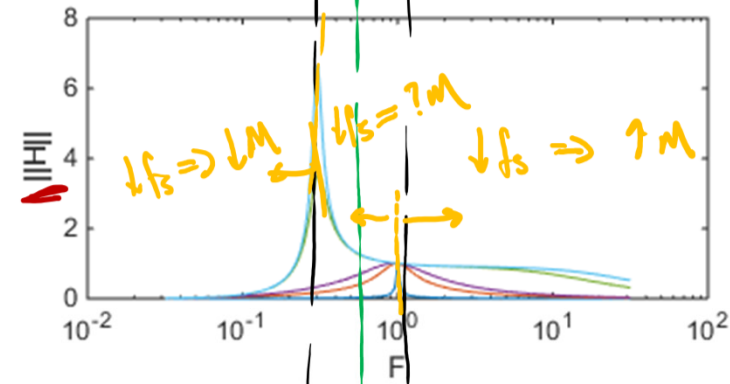
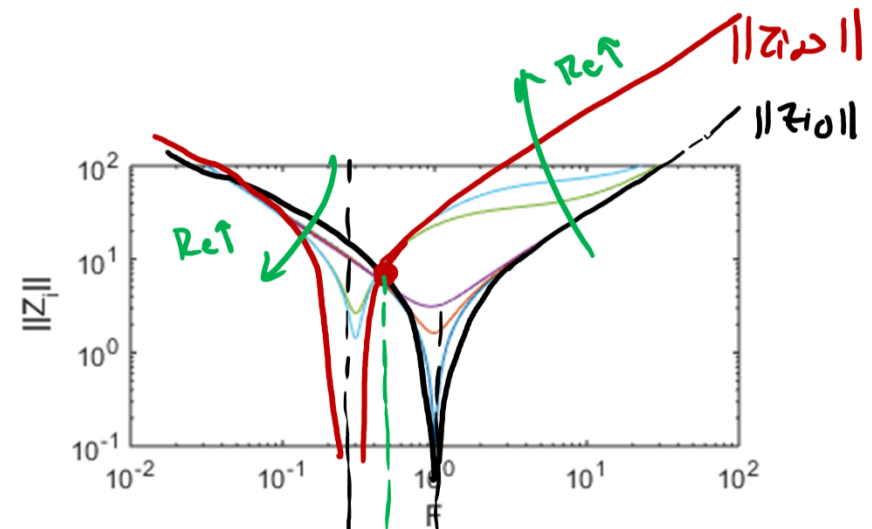
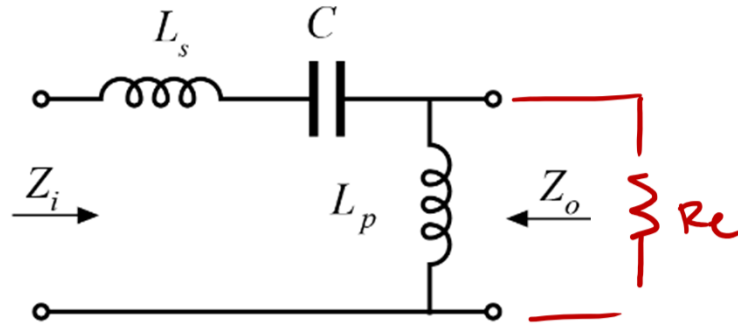
Both short-circuit & open-circuit  
have frequencies where  $Z_i \rightarrow \infty$



Power ↓ @  
light load

Power ↑ @ light  
load

# LLC



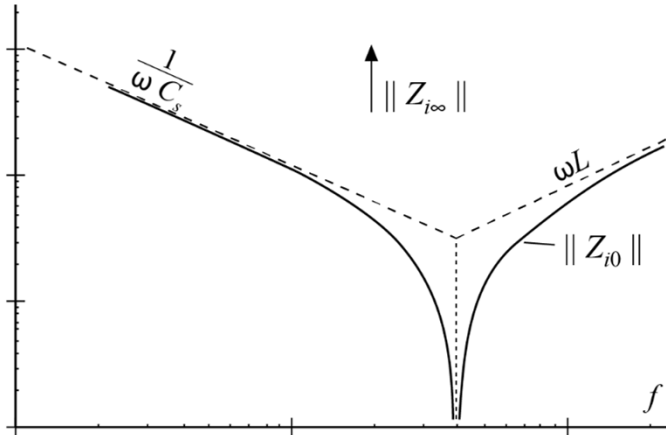
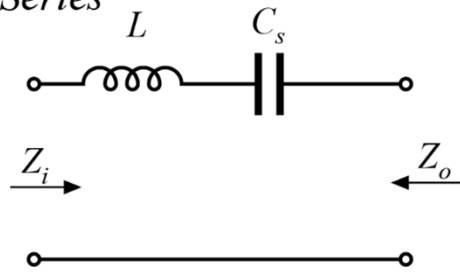
$Z_{cs}$   $Z_{vs}$   
 $Z_{cs}/Z_{vs}$   
 dep. on load

$P_{cond} \uparrow$  @ light load

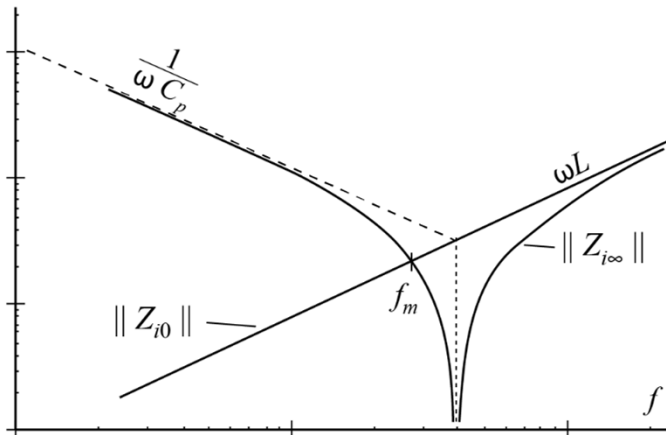
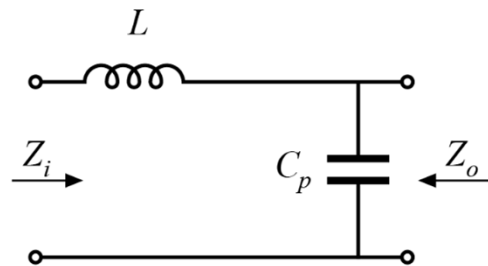
$P_{cond} \downarrow$  @ light load

# Tank Summary (1/2)

Series

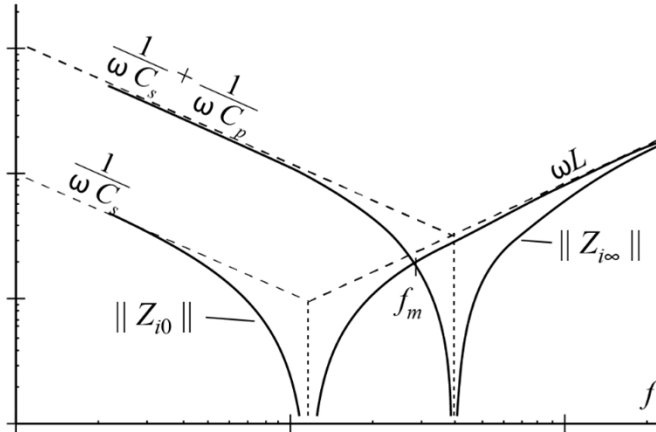
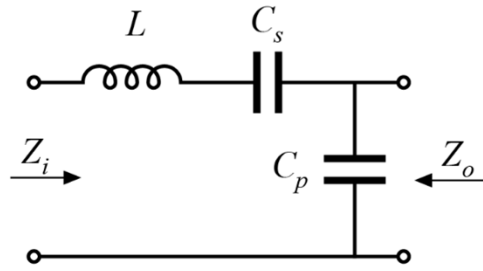


Parallel

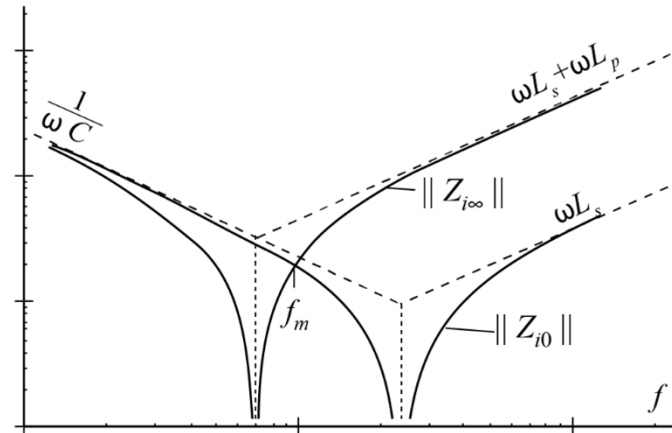
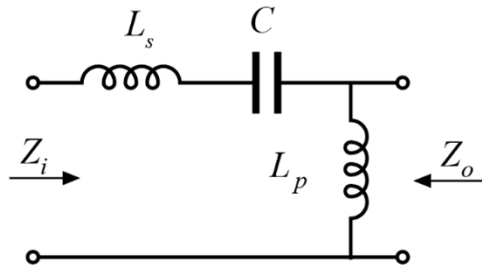


# Tank Summary (2/2)

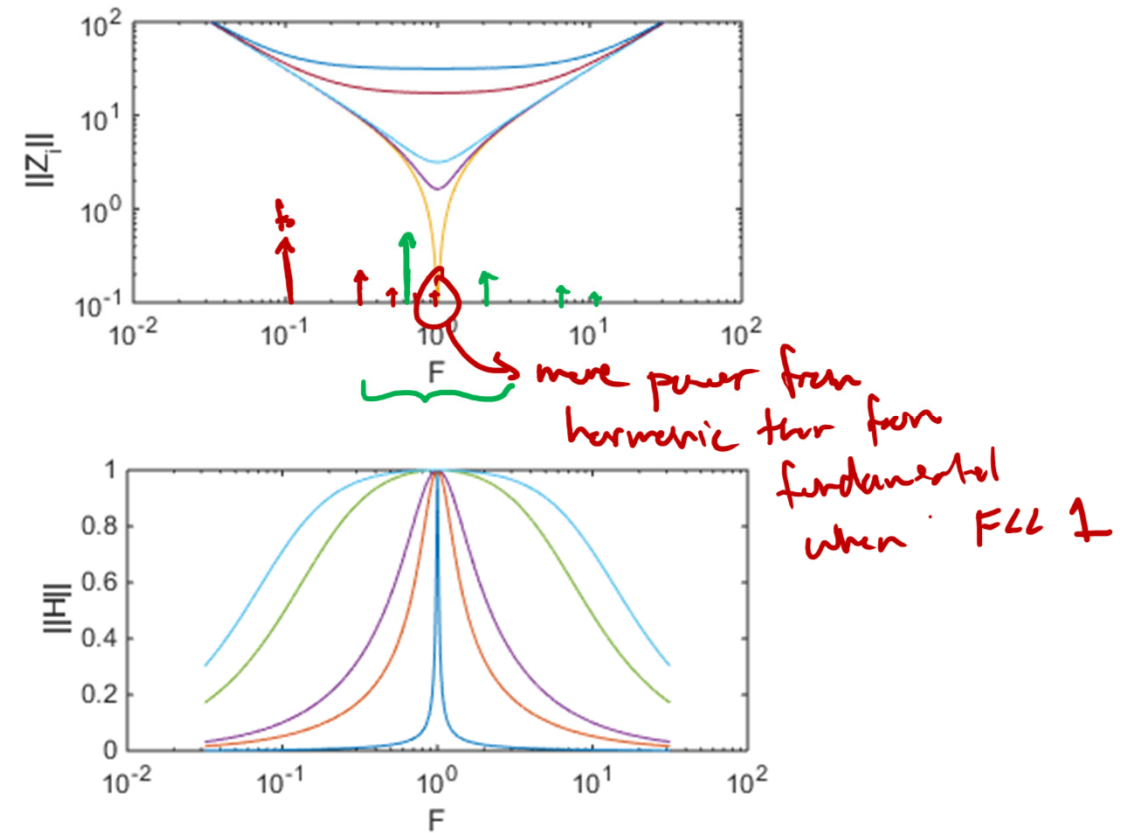
LCC



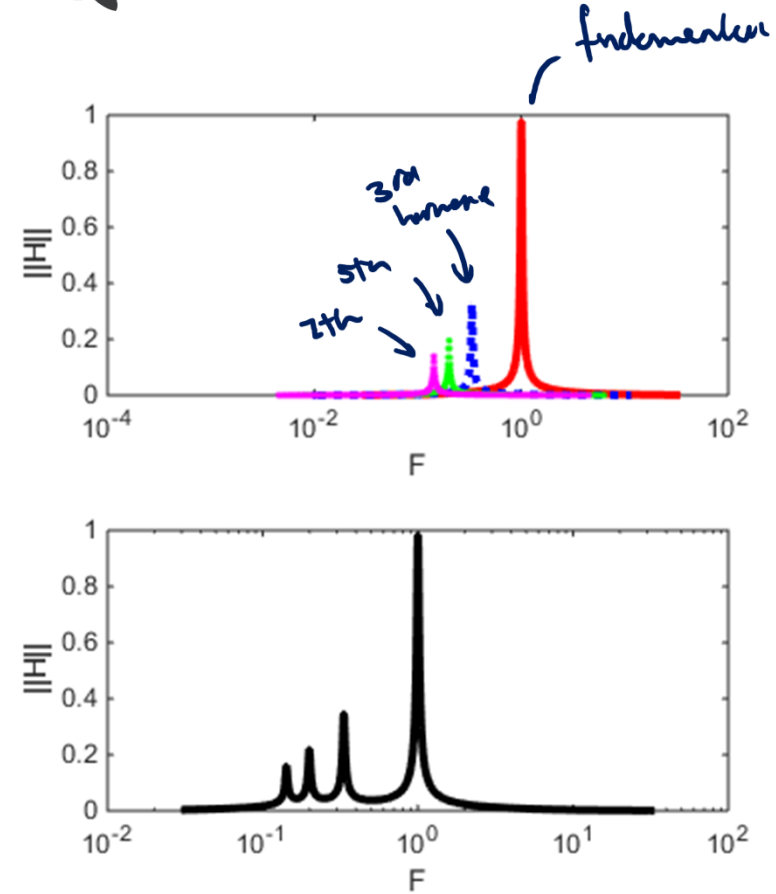
LLC



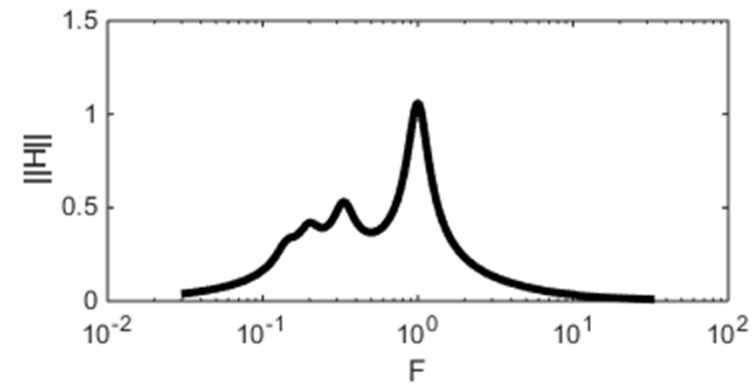
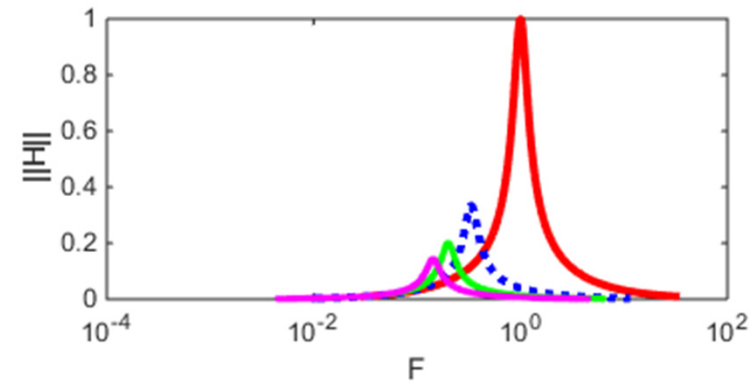
# Series Resonant Tank – Subharmonic Modes



# Subharmonic Modes - High Q

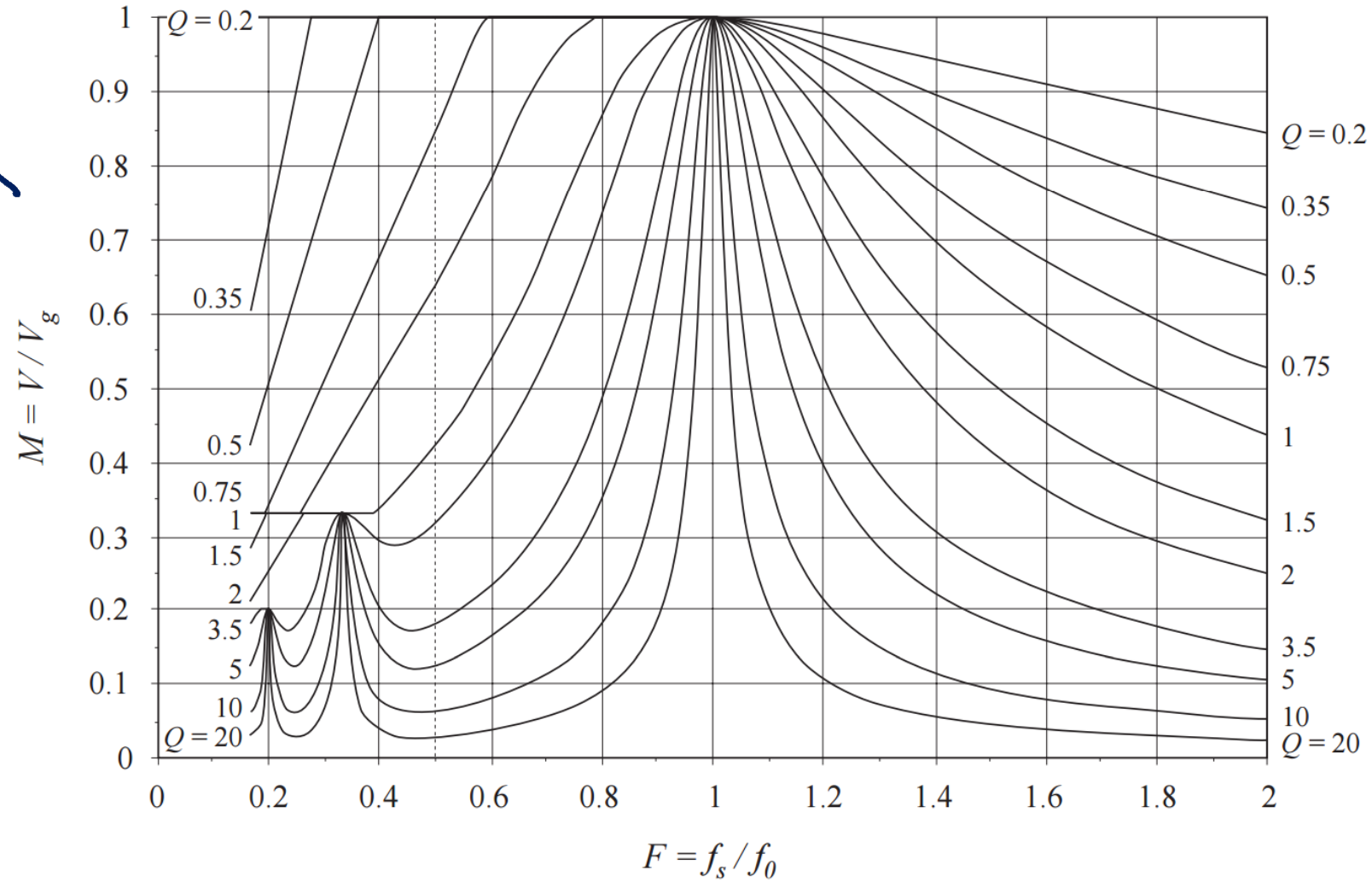


# Subharmonic Modes – Low Q



# SRC Control Plane

Book  
"exact solution"  
(By state plane analysis)



# SRC Mode Boundaries

$k \rightarrow$  subharmonic modes

