Announcements

• Design Review
  – http://doodle.com/poll/5cd3i3ya5u7k42vp
• Homework 7 Due Friday (1 Problem)
• PCB Layout Due Wednesday **before class**
  – Online “Full Competition Requirements” updated

Modulation Signal Board

• Mates on Mojo v3 (stacked headers)
• 4-pin (male) header connections
• Layout in Altium starter package on course website
Deliverables Next Wed.

• Login info to account with PCB layout that has passed Sierra Circuits’ AFV with
  – 6 mil spacing  – 2 boards
  – 15 mil holes  – Up to 6 layers
  – 4-day turn
• Excel spreadsheet of all parts, showing $150 requirements met
• Actionable ordering links/quotes for all parts

Quote Specifications
Transfer Function in Standard Form
Series Resonant Tank

Subharmonic Modes - High Q
Subharmonic Modes – Low Q

SRC Control Plane

Fundamentals of Power Electronics

Chapter 19: Resonant Conversion
SRC Mode Boundaries

Parallel Resonant Converter
PRC Tank Input Impedance

PRC Tank

![Graphs showing impedance characteristics](image-url)
Circulating Current

LCC

\[ L \quad C \quad Z_L \quad C_p \quad Z_n \]
LLC

Tank Summary (1/2)
Tank Summary (2/2)

**LCC**

\[ L \rightarrow \frac{1}{j \omega L} \rightarrow C \rightarrow \left( \frac{1}{j \omega C} \right) \rightarrow Z_0 \]

**LLC**

\[ L_0 \rightarrow \frac{1}{j \omega L_0} \rightarrow C \rightarrow \frac{1}{j \omega C} \rightarrow Z_0 \]