

Started: 12:30 pm
Ended: 1:22 pm
Total: 52 minutes

Meeting Notes

Team Kill-a-Wattz Meeting #5:

- 02/16/16
- 12:30
- ECE Conference Room

Team Member:

- Matthew Klein (present)
- Abdencio Sanchez (present)
- Nathan Gaul (present)
- Jake Querubin (present)

Discussion:

- Cold Start Up
 - New Ideas?
 - Thermal Electrical Generator
 - Hand crank to generate (energy or power) and charge up capacitor
 - 1 W for 5 V
 - $P = VI$
 - $1W = 5 VI$
 - $1 W \times 2 \text{ minutes} = 120 \text{ watts/s}$
 - $1 \text{ Joule} = 120 \text{ watts/s}$
 - Energy stored in capacitor = $\frac{1}{2} CV^2$
 - $120 \text{ watts/s} = \frac{1}{2} CV^2$
 - $C = 10 \text{ F}$ which is a super capacitor
 - Capacitor may not survive at 250°C
 - Few capacitors (ceramic) work at 195°C
 - Talk to airport battery charger team about super capacitors
 - GaN can handle high temperatures
 - Avoid manual and batteries (take room)
- Other Ideas
 - Amrit's Idea use depletion mode for startup
 - Transmit current
 - Need something so it won't overheat
 - Possibly a transformer
 - Develop Concept: Put ideas together and apply knowledge
 - Solar Energy (use heat)
 - Photovoltaic Power System
 - Good Idea but what if it's cold?
 - Rectenna

- Convert electromagnetic energy into direct current (DC)
- Has its pros and cons
- Network with other teams
- IEE database
 - Can find ideas here for soft startup

Research:

- Keep researching soft startup ideas
- Organize and get tasks done
- Look at available resources

Deadlines:

- Look for deadlines on Senior Design Page
 - Snapshot Day
 - Log Book
 - Wikipage

Announcements

- Team HE.E.T Design Review will take place on March 10th 2016
- Location TBA
- Drop Box is done

Next Meeting

- February 23, 2016 @ 12:30
- Location: ECE Conference Room