

Gunn Diode Oscillator Minutes

David Headland

2004-03-18 10:00

Attendance

- Fourth year students:
 - AJ Nelms.
 - JM Higginbotham.
 - R Wan.
 - DP Headland.
 - MP Gaskill.
 - RE Irwin.

Approvals

- The minutes from last week's meeting were approved.

Budget allocations

- Budget allocation forms were submitted to MP Gaskill.

Power supply

- Power supply testing was discussed.

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- The wiring of the switch and polarity of cables needs checking.
 - The PSU case was discussed and demonstrated.
 - A suggestion was made to blank the bottom slot on the AT case.
 - The idea was rejected.
 - Leaving it free would allow air from over the heatsinks then out through the AT PSU extractor fan.
 - Work on the software is continuing.
 - A circuit for reference voltages has been set up and is being tuned.
 - Tests will be made with the AT PSU.
 - Current limiting will require a $\frac{1}{3} \Omega$ high power resistor.
 - Three 1Ω , 11 W resistors in parallel were suggested.

Simulation

- Many problems are being encountered.
- The simulation does not match up with the theory.
- Time will be booked with R Sloan to try to provide suggestions.
- WS Truscott suggested writing a mini report on the current simulation situation.
- RE Irwin's simulations are progressing well.
- She has developed a good knowledge of the radial line transformer and the relationship between its shape and resonance.
- Work is being carried out to determine if there is an advantage to having more than one notch in the radial line transformer.

Manufacture

- MP Gaskill talked to Bernard during the week.
- He has included a spring for tensioning the radial line transformer.
- Gunn diode housing calculations were submitted to DP Headland.
- Bernard has all required parts from P Norton.
- P Norton will fit all parts to the housing.
- A meeting with e2v at the start of next week has been suggested.
- MP Gaskill will arrange this meeting today.

Team working

- The team working prize forms have been filled in.
- Information from the Accenture presentation has been considered.
- A large amount of details has been included.
- The demonstration was discussed.

Test equipment

- Progress with the waveguide extensions was discussed.
- WS Truscott has not talked to the workshop.
- WST, AJN and DPH will visit the workshop after the meeting.
- The attenuator was discussed.

Issues log

- The idea of an issues log was discussed.
- One should be created based on issues raised in previous minutes.
- The log should be updated in real time from now on.
- This should be included in the final report.

Final report

- Search for “power combing” in the final report.
- The report sections are due in on or preferably before 2 April 2004.

Proposed actions

All	Attend meeting for e2v questions if possible: 2004-03-22 12:00.
MP Gaskill	Arrange the e2v meeting and mail the date to the list to solicit candidates.
JMH, REI	Create a mini report of the simulation progress.
JM Higginbotham	Book simulation time with R Sloan.
AJN, RW, DPH	Design PCB.
RE Irwin	Mail team working document to the list.
All	Mail RE Irwin with changes to the team working document.
RE Irwin	Include liaison with e2v in the final report.
DP Headland	Create an issues log based on past issues.
DPH, AJN	Arrange the first week of Easter for project work.
RE Irwin	Talk to Tuesday’s lecturers regarding e2v visit.

Next meeting

Time Thursday 25 March 2004, 10:00.

Place D2c coffee room.

Meeting adjourned, 11:48.