

Examination Feedback for EEE6393 – Microsystem Packaging
Spring Semester 2009-10

Feedback for EEE6393 Session: 2009-2010

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

Generally well answered exam questions, with students scoring well.
All students avoided Q1 – discussed below.

Question 1:

Not a single student answered this question, which is of concern. The question dealt with 3d packaging, which was covered in the (poorly attended) final lecture of the course. Maybe this is the reason it was not favoured. The subject was a recent addition to the syllabus (new this year). It should be more integrated into the rest of the syllabus next year, rather than a stand-alone lecture.

Question 2:

Numerical parts (a&b) generally tackled well, though some students used the *total* thermal resistance with the graph rather than the heat sink thermal resistance. Part c) not answered well – most students failed to mention TCE mismatch. Part d) gave some students the (false) opportunity to describe PCB fabrication method, though this is not what was asked for. Otherwise answered well. Only one student mentioned opto-electronic PCB in part e), whilst many mentioned 3d stacking.

Question 3:

Most of the students knew what SiP/SoC meant, but some of the detail on advantages/disadvantages was not given. Parts b) and c) were easy enough and students got the answer. Most students also gave able descriptions in d), although some just said what the package was, without explanation. Part e) completely floored most of the students, who did not consider the eqn. for radial heat spreading, as clearly mentioned. Most students answered f) without any difficulty

Question 4:

4a was answered very well. Most students gave the mutual inductance OK, but forgot or made a mess on the cut off frequency. Parts c) and d) were answered well. It was pleasing to see many students have a good go at part e) which needs some thought beyond the notes. However a few just repeated the principles of packaging without any specific detail. Most however suggested a good package choice.