

Marking Scheme for Lab #2

October 19, 2006

[] Indicates the number of marks out of 100.

3. [15] Measured VSWR, d_{\min} , Z_L .
[10] V vs. d graph
4. [10] Find the normalized load impedance, z_L , using the measured VSWR and d_{\min} on the Smith Chart.
[5] Compare z_L calculated from the Smith Chart to the one measured in Part 3.
[5] Obtain z_A by rotating z_L by $d=3.4\text{cm}$ on the Smith Chart.
5. [5] Transform z_A to y_A on the Smith Chart.
6. [20] Design a double-stub matching network for the load provided using a Smith Chart. Show the calculated stub lengths d_2 and d_3 , in terms of wavelengths and cm. Show that there are two solutions.
7. [10] Record the final stub lengths d_2 and d_3 obtained experimentally to match the load to the line. Show the input impedance of the matched load on a Smith Chart.

[5] Record the final VSWR and sketch V vs. d for the matched load.

[10] Discuss how the measured results compare to the theoretically calculated ones and outline any potential sources of errors.

[5] Presentation and neatness.

TOTAL: 100 marks