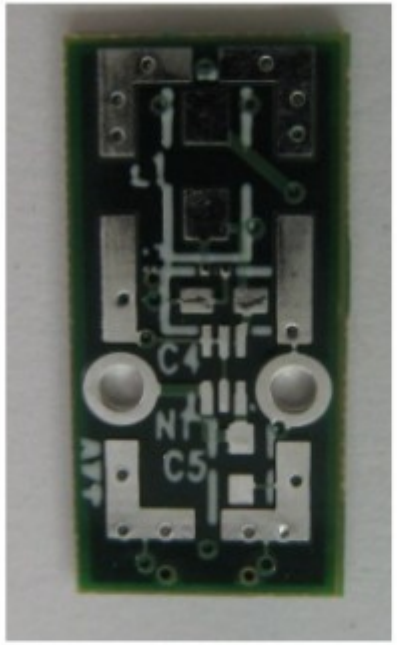
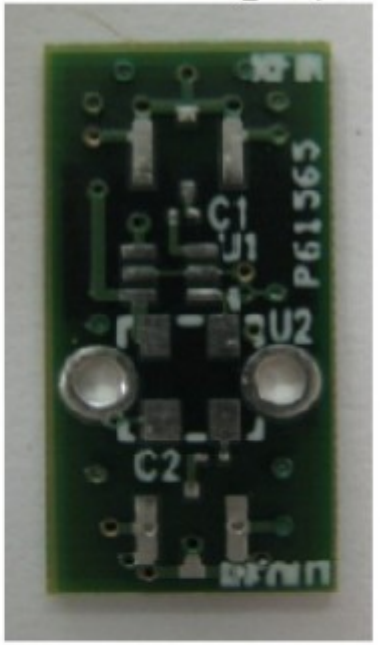
20dB Amplifier Board and Carrier Board Design and Testing

Board Pictures

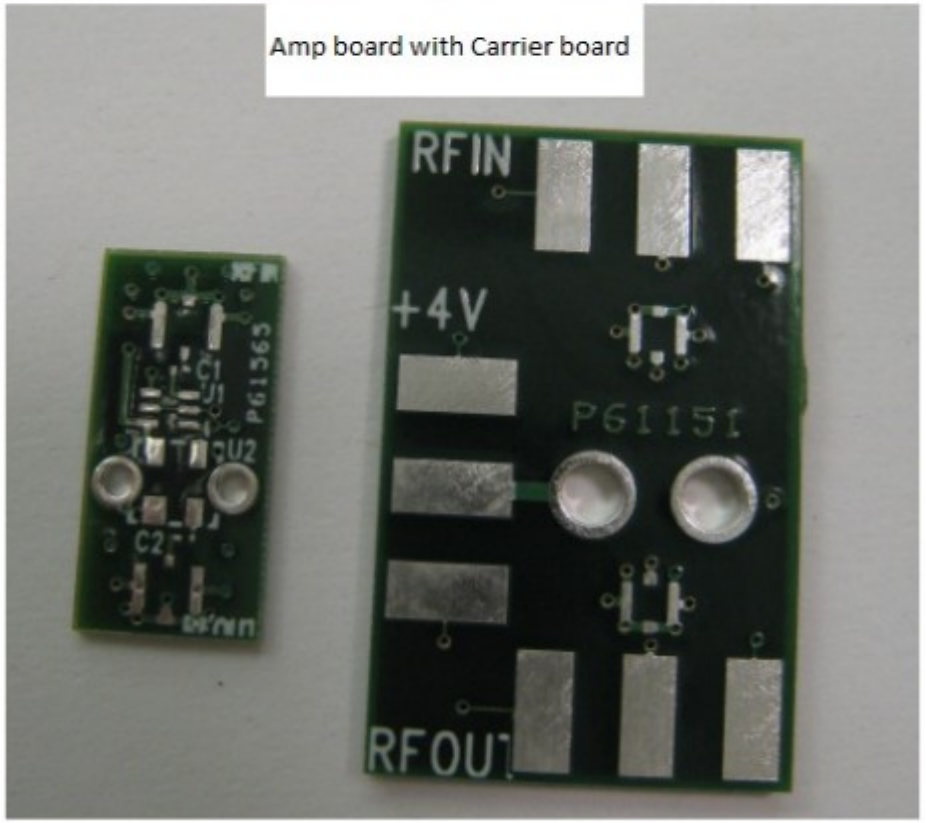
Amp board
Top View_DC layer



Amp board
Bottom view_RF layer

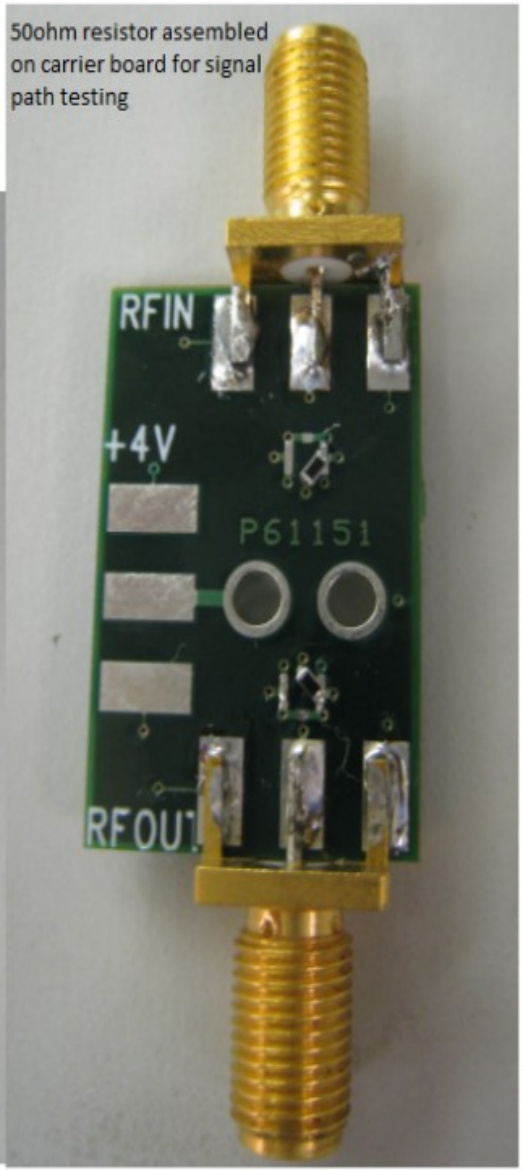


Amp board with Carrier board

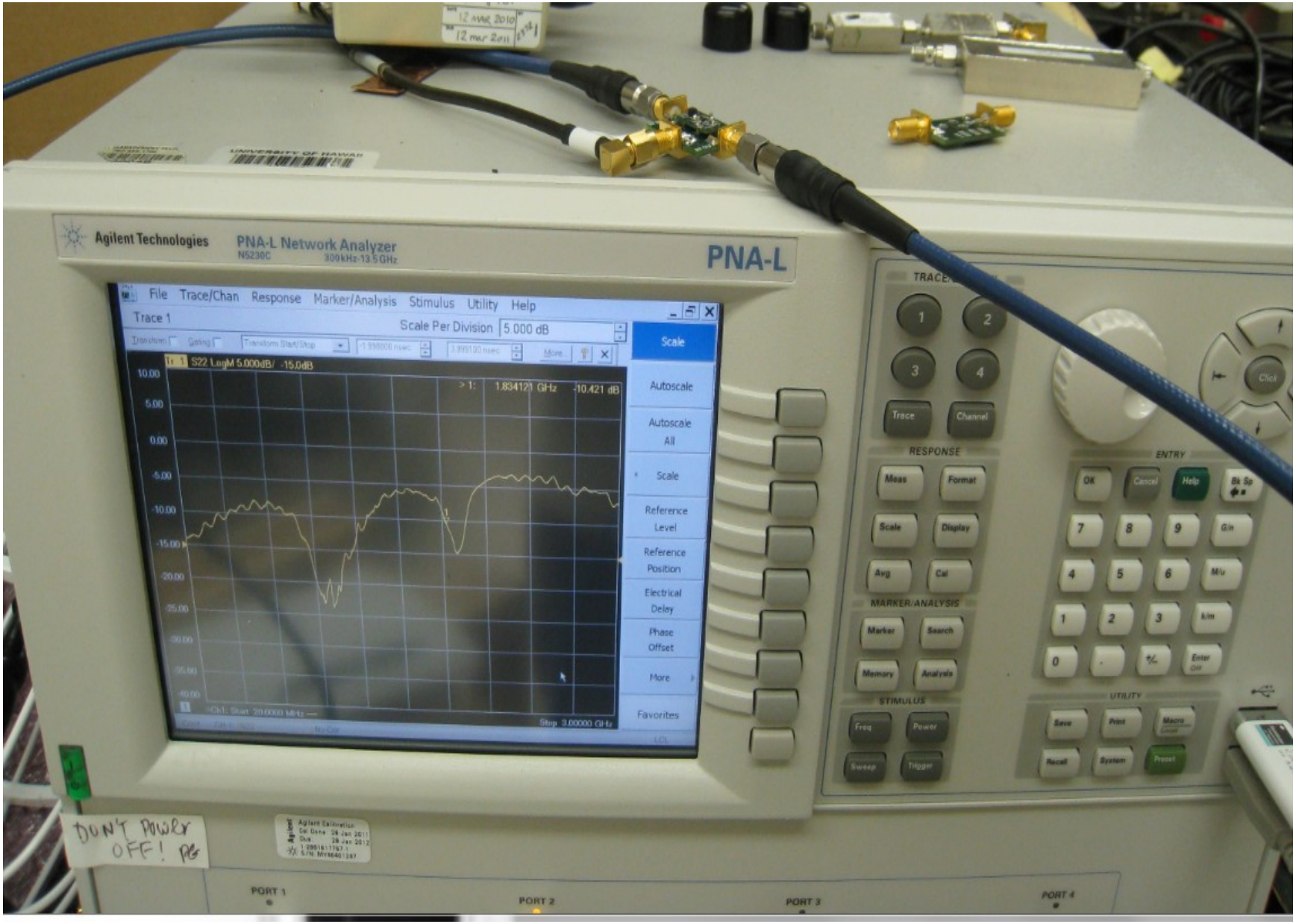


Amp Board snaped on Carrier Board

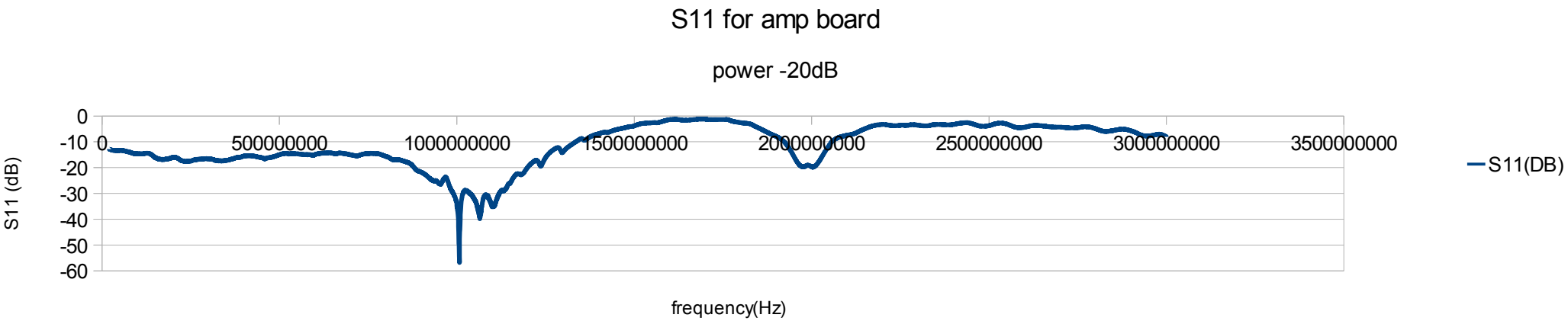
50ohm resistor assembled on carrier board for signal path testing

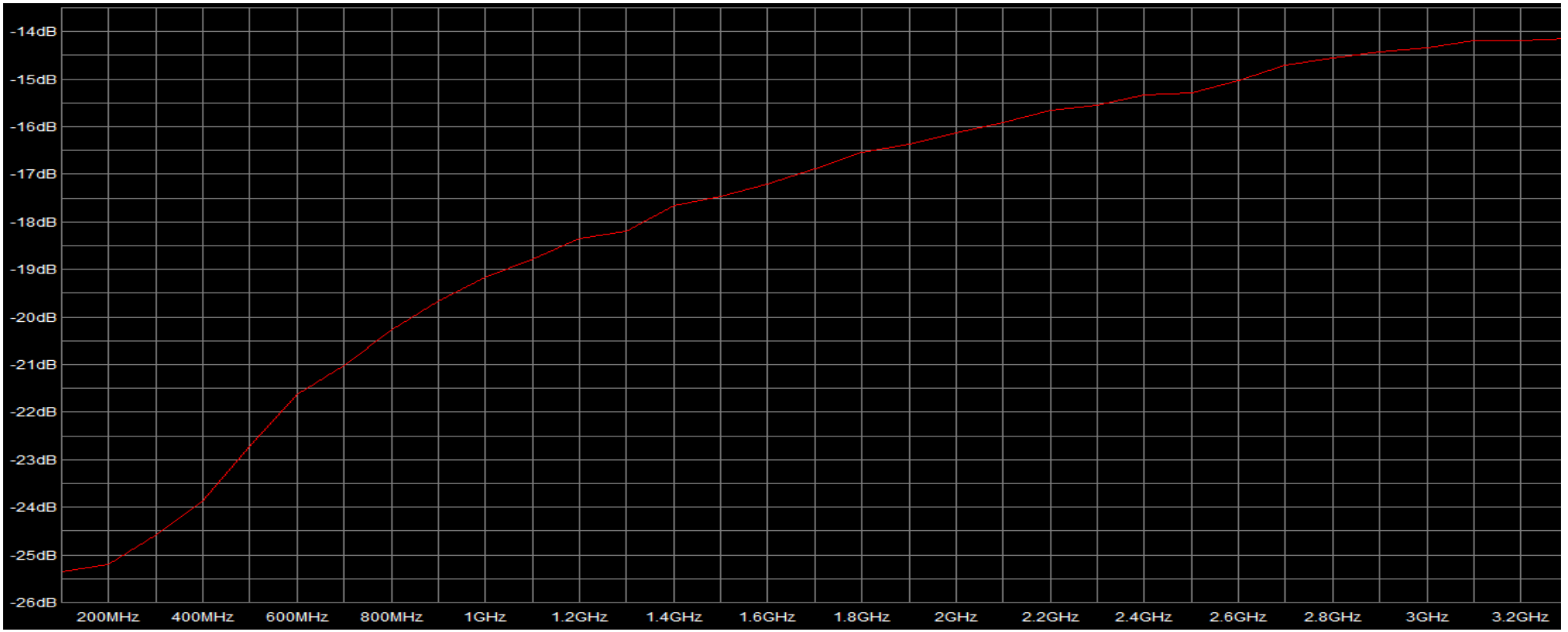


Testing setup

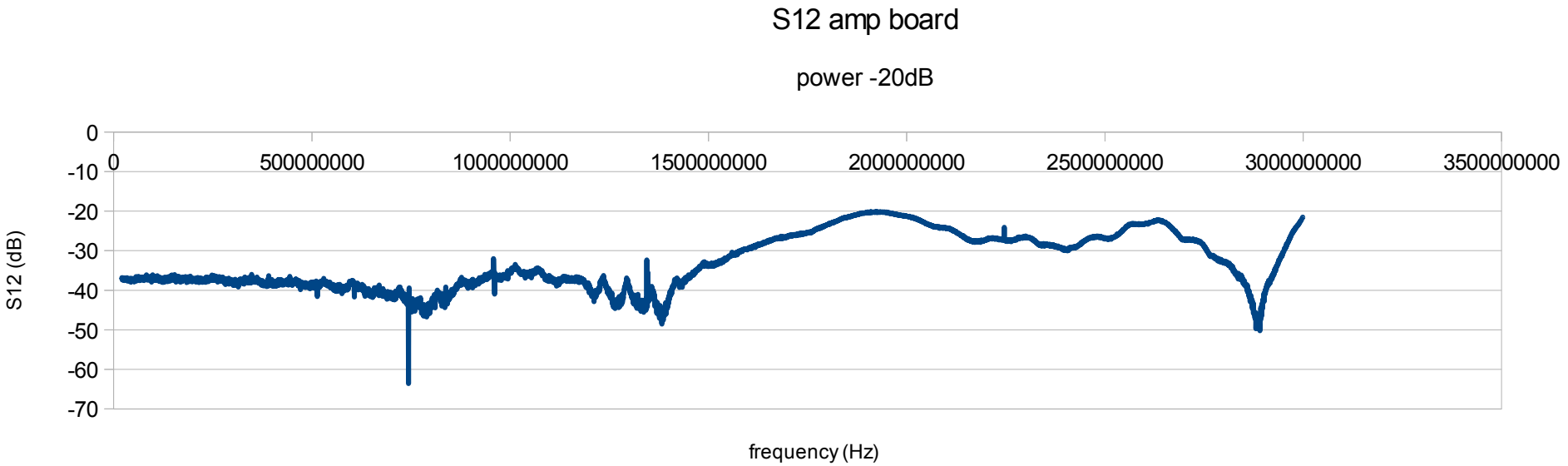


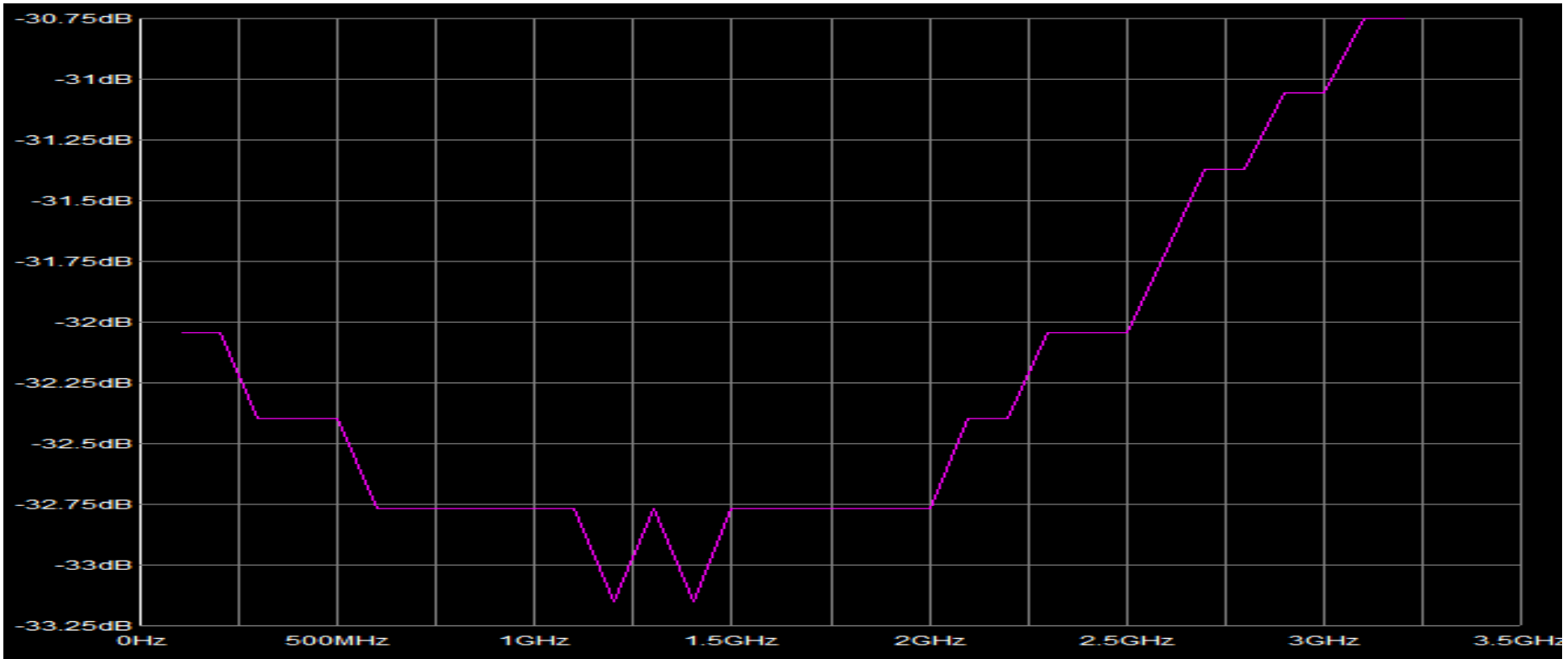
S11compared with model



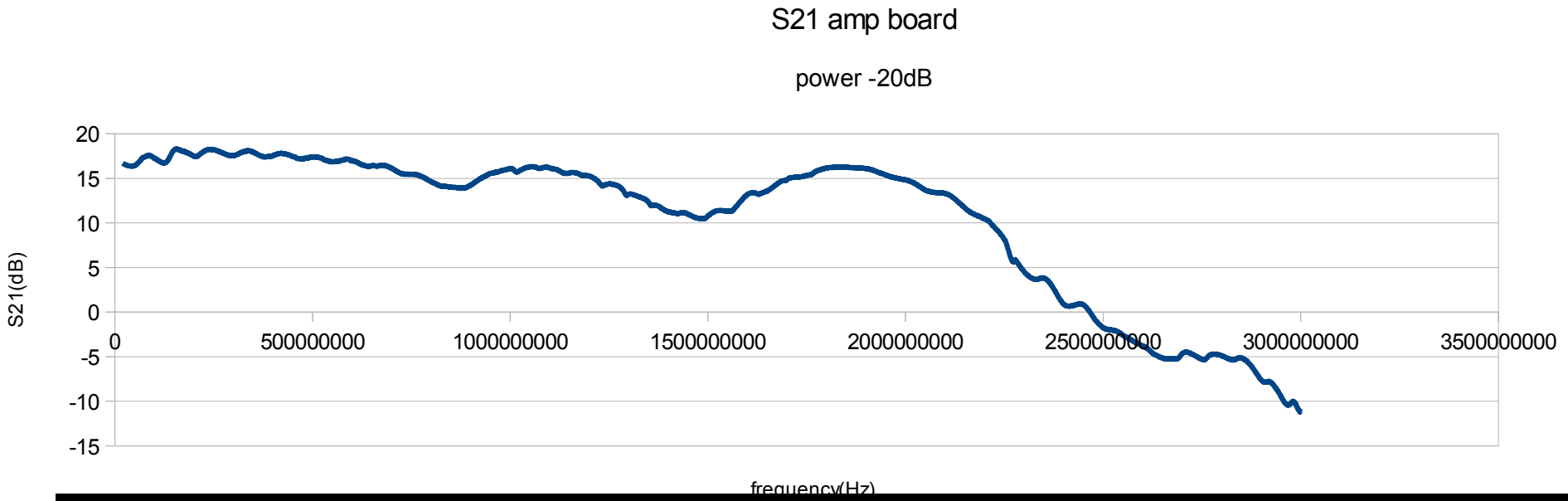


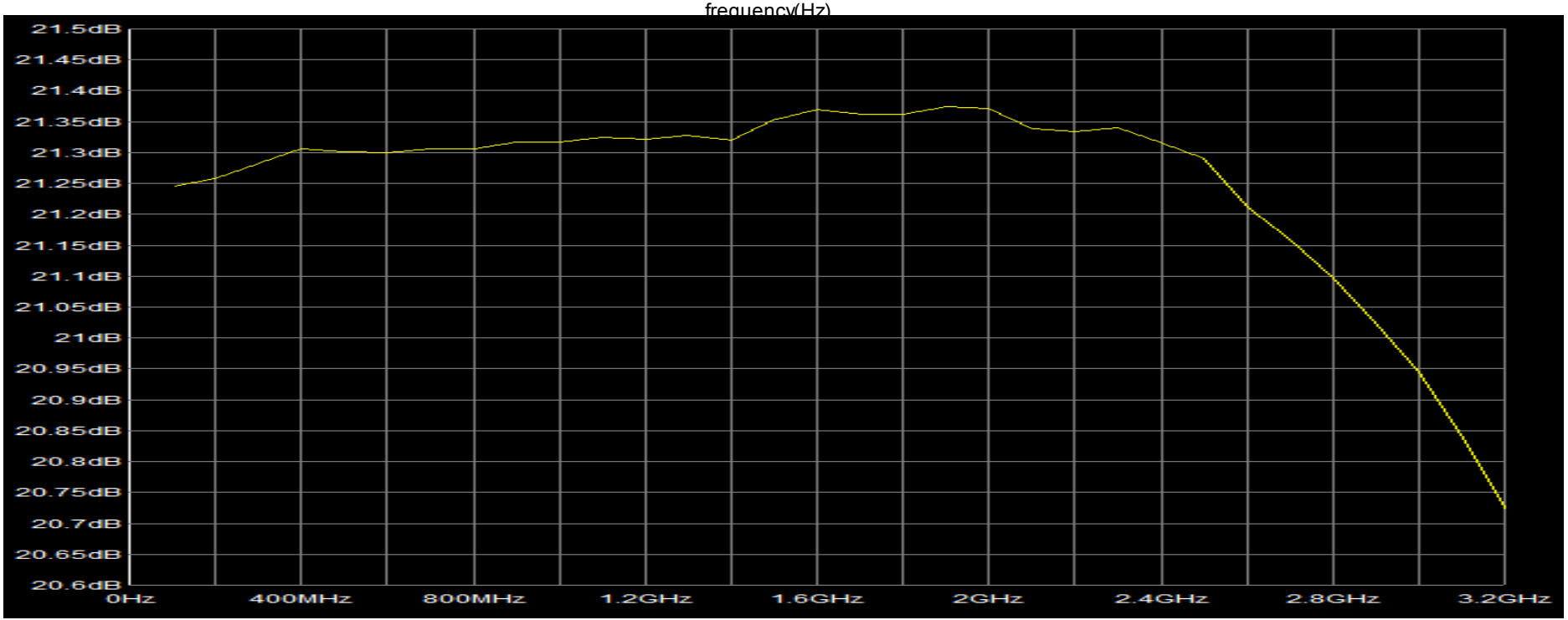
S12compared with model



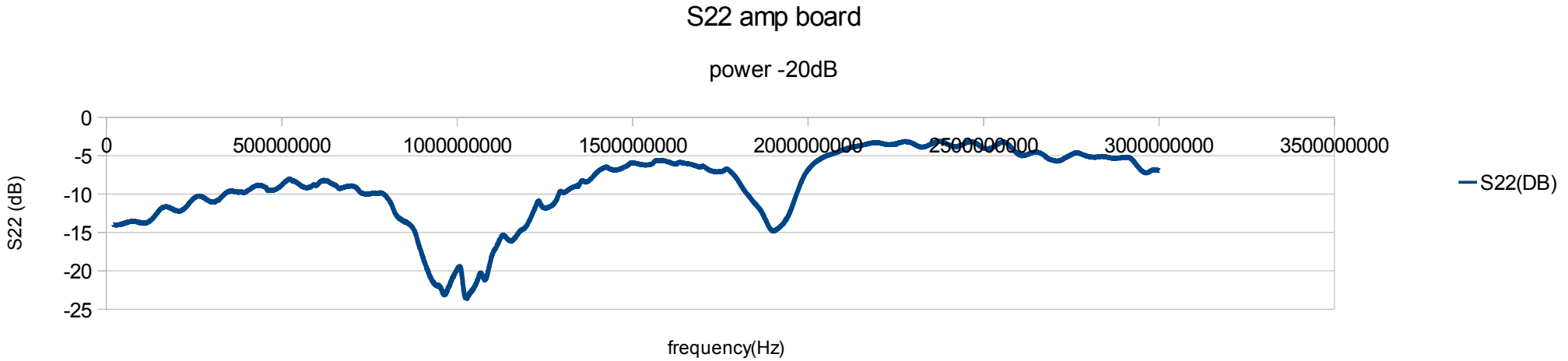


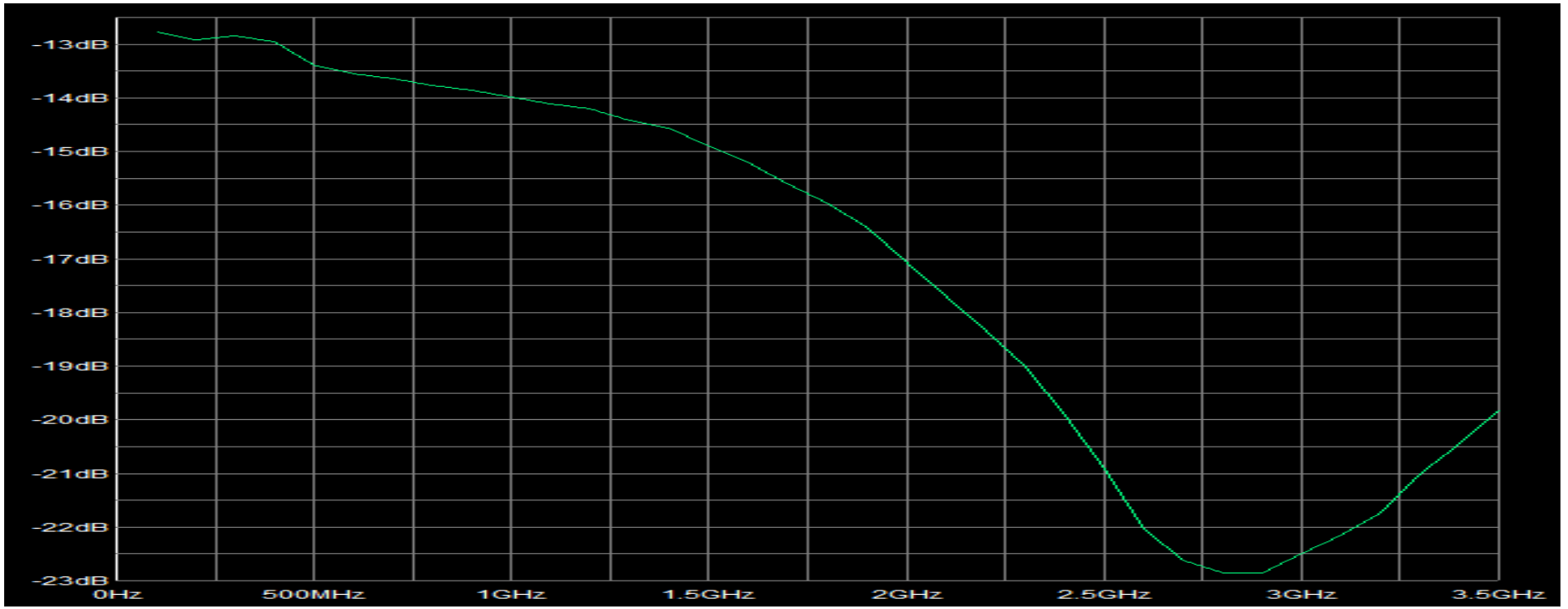
S21compared with model



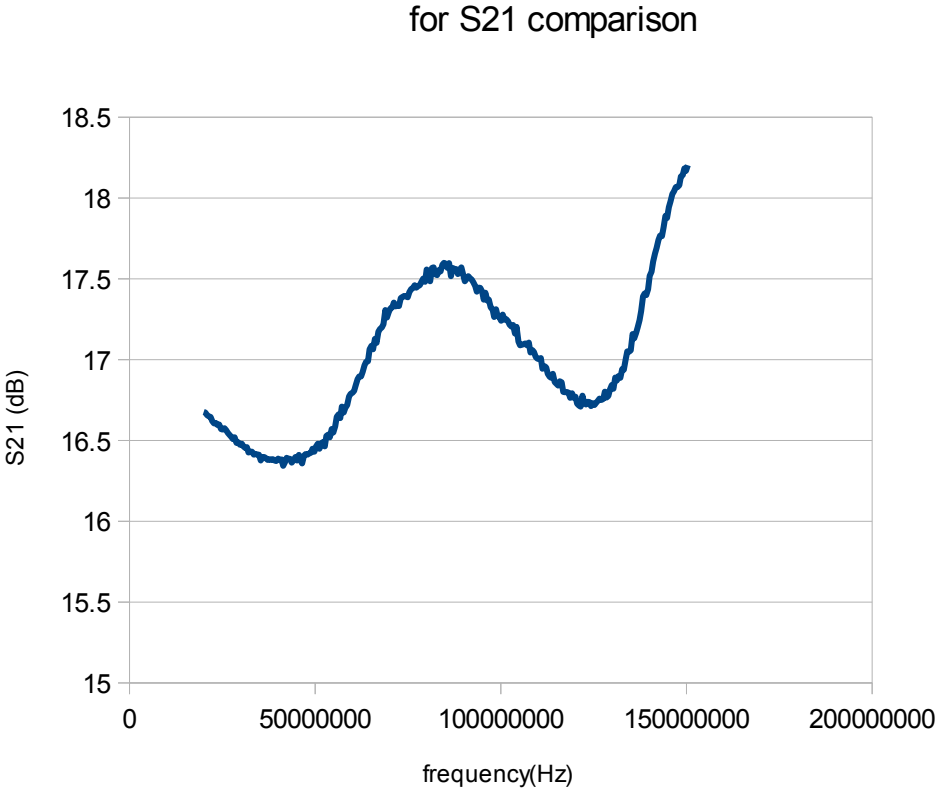


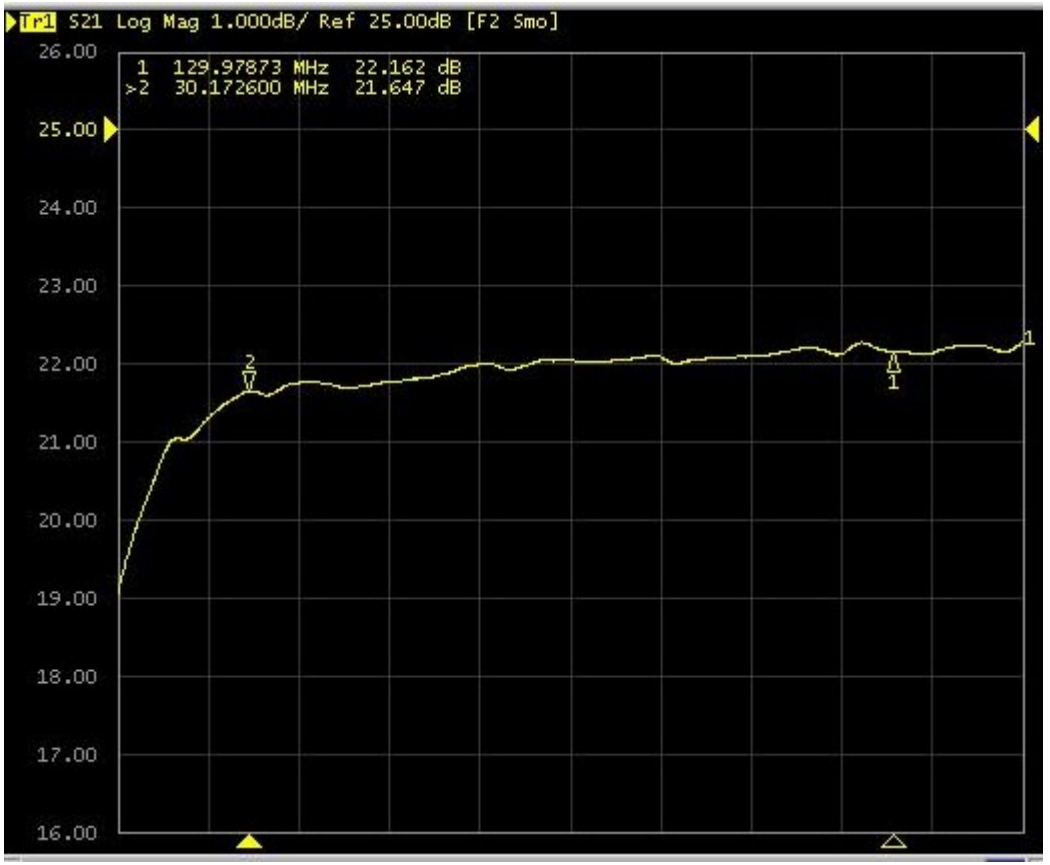
S22compared with model





Compared with Patric's test

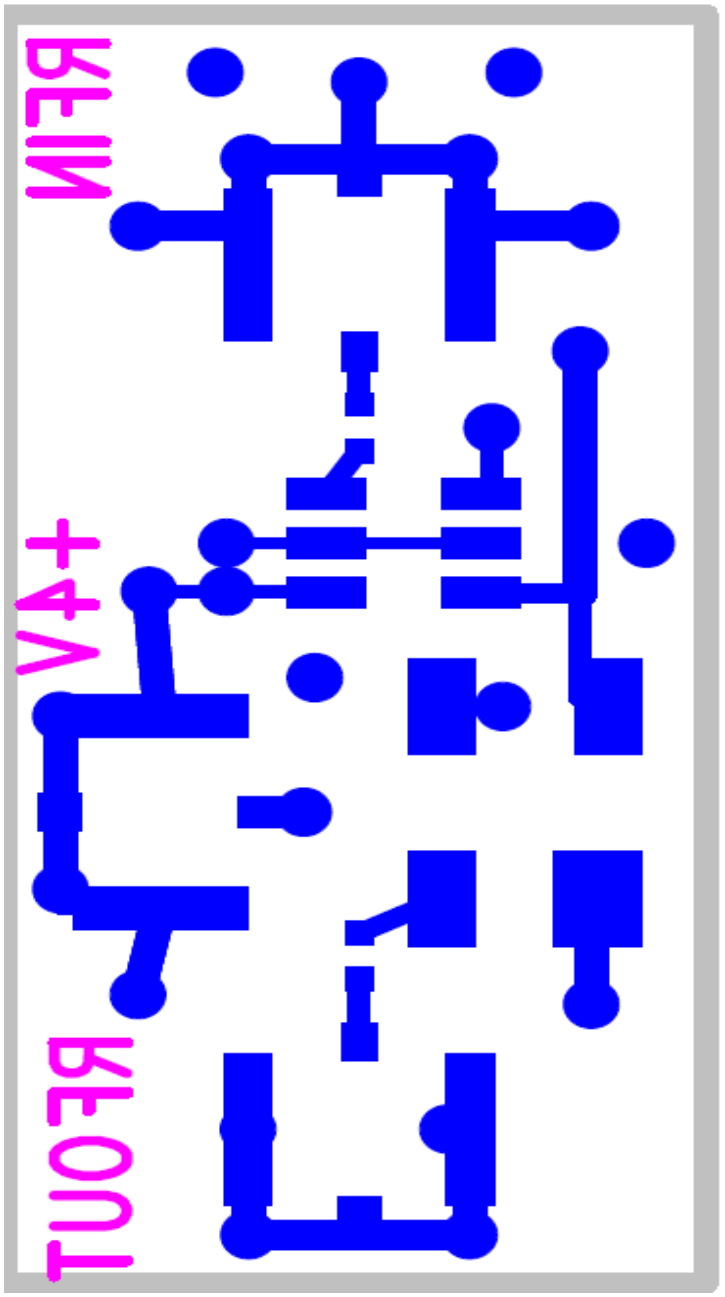


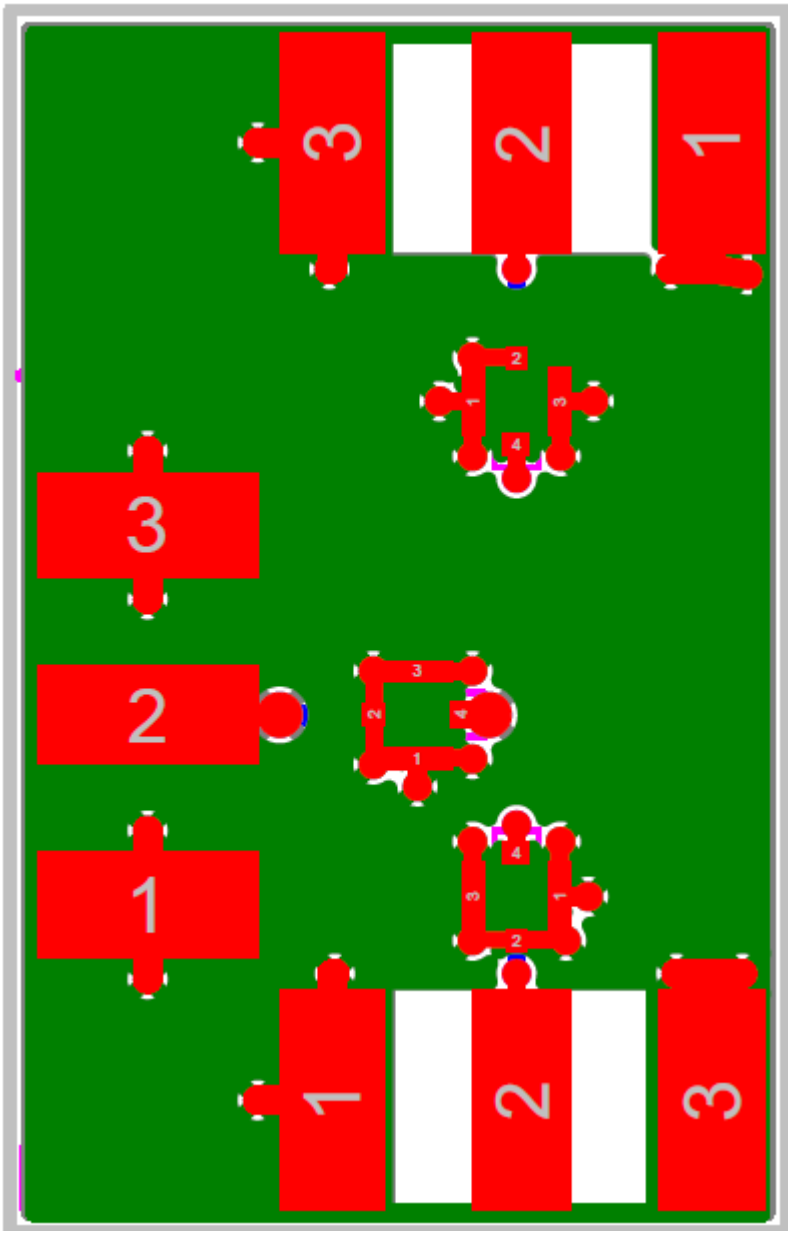


	Freq(Hz)	S21(DB)
Marker2	30243750	16.479471
Marker1	129887500	16.843279

- Quite satisfied with the board performance
- In order to improve the ananolg performance and also fix some hardware problems
  - RevC Amp board and RevB carrier board were designed
  - During fabrication(will get later this week or early next week)

Next Revision





Plans

- Test the performance of the new revision boards
  - Hope to get better results
- Test 3 Amp Boards in series to see the gain
  - 60dB wanted
- STURM2 Carrier board and Readout Mother board in design process