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Worst-Case Analysis of Magnet Driver – Compared to Spice AC “.WCASE”.

The intent here is to contrast the correct method of ac worst-case analysis (WCA) using MATLAB with that performed by Spice software. Probably the most popular commercial version of Spice software is PSpice, which, among other deficiencies, does not have RSS capability.(as of Version 9.0) (See Magnet Driver WCA.doc. for PSpice for bogus WCA analysis.)

For the correct WCA procedure, see magdrvrev.m, which generated the following plots.

Note that R3 sensitivity is slightly bipolar, indicating a non-monotonic component. Also note that EVA tolerance bands are wider than RSS, which is to be expected.

