Thick Metal Models

J. C. Rautio Sonnet Software, Inc., USA

Both the fine detail of fields at the edge of thick metal and the large scale fields over an entire circuit must be accurately represented in an EM analysis in order to correctly analyze thick metal in a planar circuit. This is a very difficult EM problem that has seen substantial research over the last decade. As a result, all serious commercial EM tools now include specialized thick metal models. The different models are briefly described and their relative advantages and disadvantages pointed out. Techniques for quantifying thick metal modeling error, as well as determining if a thick metal model is even needed, are detailed.