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pcbmodelgen.json
62 "box_fill" :
63 {
64     "use_box_fill" : false,
65     "box_material" : {}
66 },
67 "materials" :
68 {
69     "pcb" :
70     {
71         "boundary_one_third_rule" : false,
72         "boundary_additional_lines" : true,
73         "boundary_rule_distance" : 0.1
74     },
75     "metal_top" :
76     {
77         "boundary_one_third_rule" : false,
78         "boundary_additional_lines" : true,
79         "boundary_rule_distance" : 0.1
80     },
81     "metal_bot" :
82     {
83         "boundary_one_third_rule" : true,
84         "boundary_additional_lines" : false,
85         "boundary_rule_distance" : 0.1
86     },
87     "hole_fill" :
88     {
89         "boundary_one_third_rule" : false,
90         "boundary_additional_lines" : false,
91         "boundary_rule_distance" : 0.1
92     }
93 }
94
95
```

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simulation_script.m
46 % Define excitation port
47 %start = [2.5 -3.5 0];
48 %stop = [2.5 -5.5 1];
49 % Define excitation port
50 start = [52 -101 0];
51 stop = [53 -100 0];
52
53
54 % Priority MUST be > 3
55 [CSX port] = AddLumpedPort(CSX, 15, 1, 50, start, stop, [0 1 0], true);
56
57 % Setup materials used (WARNING: check that material names are same in config.json)
58 CSX = AddMaterial(CSX, 'pcb');
59 CSX = SetMaterialProperty(CSX, 'pcb', 'Epsilon', 4.2, 'Mue', 1, 'Kappa', 0, 'Sigma', 0, 'Density', 1);
60 CSX = AddMaterial(CSX, 'metal_top');
61 CSX = AddMaterial(CSX, 'metal_bot');
62 CSX = AddMaterial(CSX, 'drill_fill');
63 CSX = SetMaterialProperty(CSX, 'drill_fill', 'Epsilon', 1, 'Mue', 1, 'Kappa', 0, 'Sigma', 0, 'Density', 1);
64 CSX = AddMaterial(CSX, 'box_material');
65 CSX = SetMaterialProperty(CSX, 'box_material', 'Epsilon', 1, 'Mue', 1, 'Kappa', 0, 'Sigma', 0, 'Density', 1);
66
67 % load model in CSX structure (model script is output from pcbmodelgen)
68 CSX = kicad_pcb_model(CSX);
69
70 % load auto generated grid mesh lines
71 model_mesh = kicad_pcb_mesh();
72
73 % define grid (WARNING: check that units is what was used in design)
74 CSX = DefineRectGrid(CSX, unit, model_mesh);
75
76 disp('Model import and simulation setup done');
77
78 % Prepare simulation folder
79 Sim_Path = 'tmp';
80 Sim_CSX = 'simulation.xml';
```

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