

Problem info

Problem type: DC Conduction

Geometry model class: Plane-Parallel

Problem database file names:

- Problem: *pcb_current.pbm*
- Geometry: *Pcb.mod*
- Material Data: *Pcb_current.dcf*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

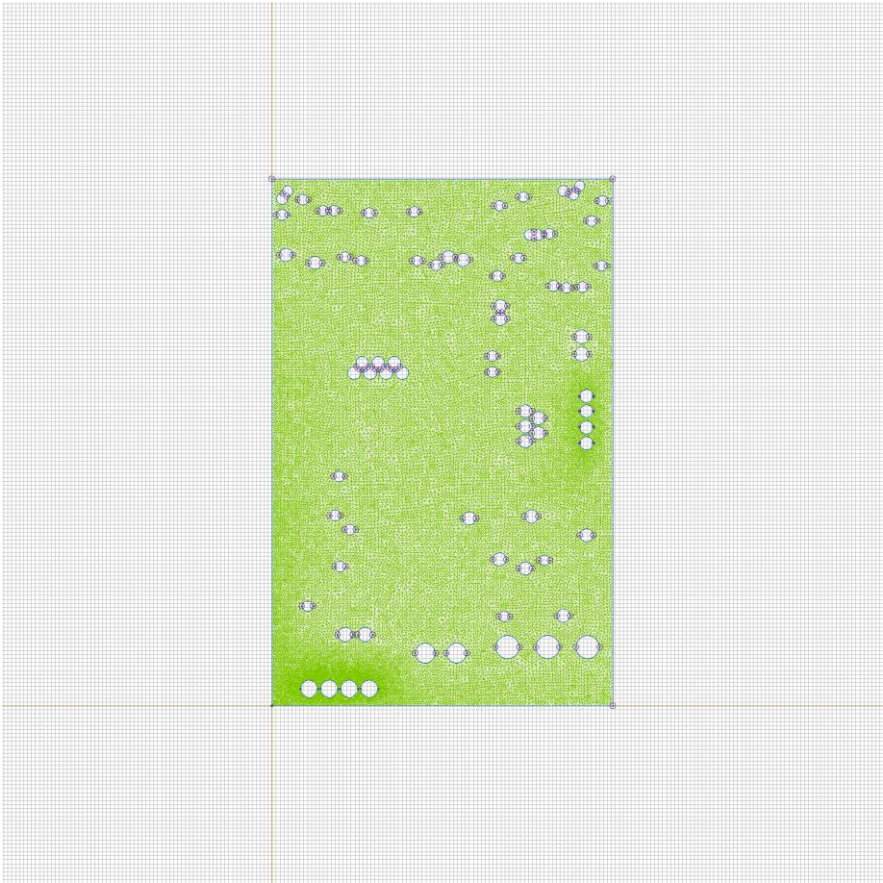


Table 1. Geometry model statistics

	With Label	Total
Blocks	1	68
Edges	3	157
Vertices	0	155

Number of nodes: 25668.

Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

Blocks:

- [copper](#)
-

Edges:

- [boundary](#)
- [U=0](#)
- [current 10A](#)
-

Vertices:

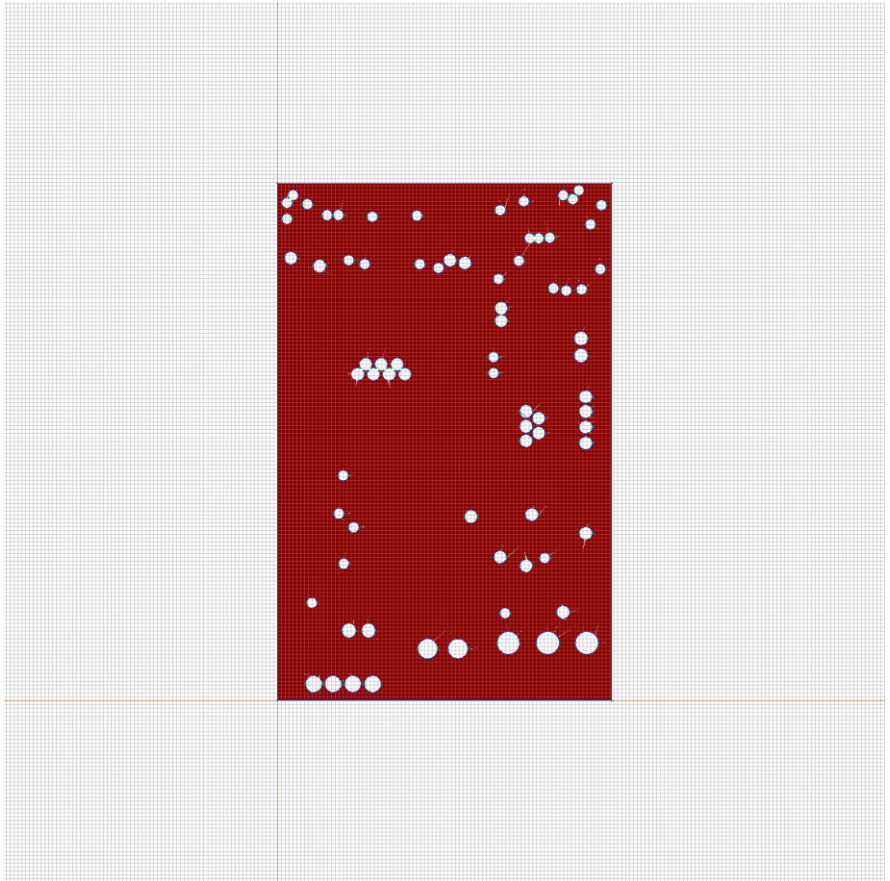
Detailed information about each label is listed below.

Labelled objects: block "copper"

There are (1) objects with this label

Electrical conductivity: $\sigma_x=500000000$ S/m,
 $\sigma_y=500000000$ S/m

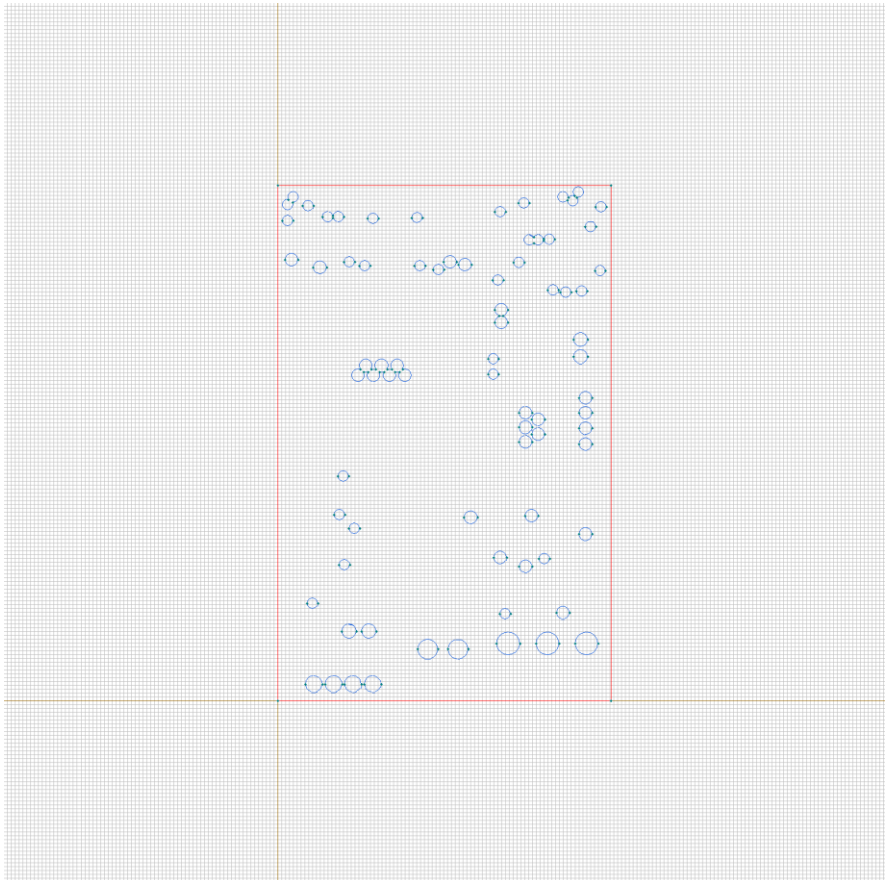
Reference temperature: $T=0$ K



Labelled objects: edge "boundary"

There are (4) objects with this label

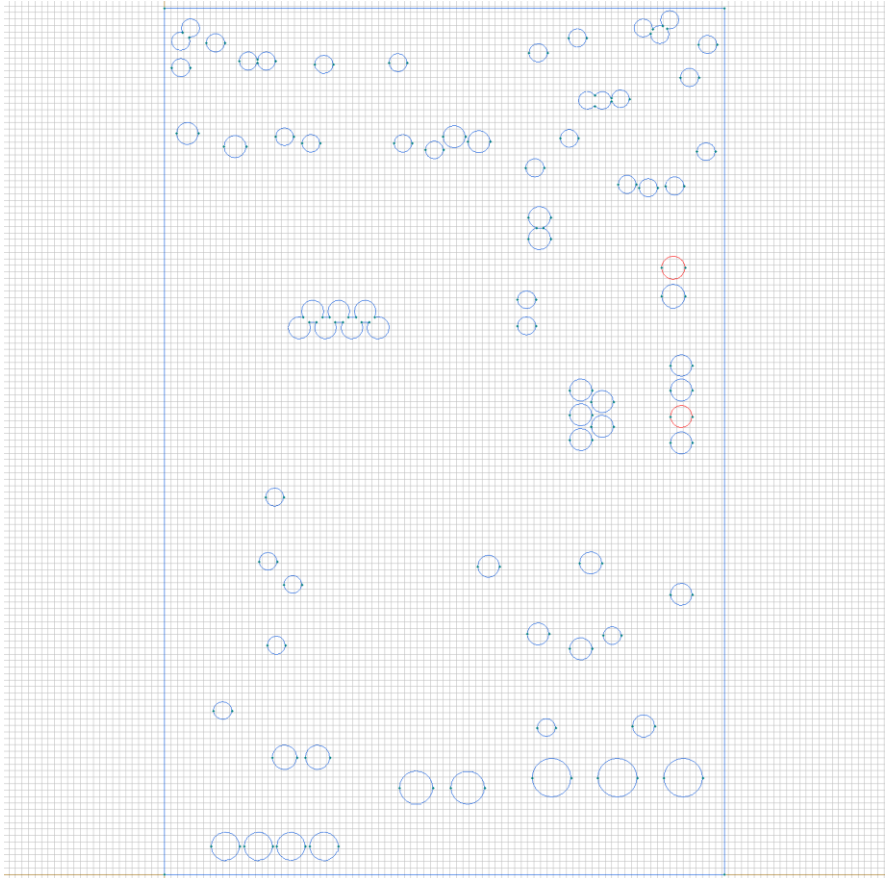
Normal current density: $j_n=0$ A/m²



Labelled objects: edge "U=0"

There are (4) objects with this label

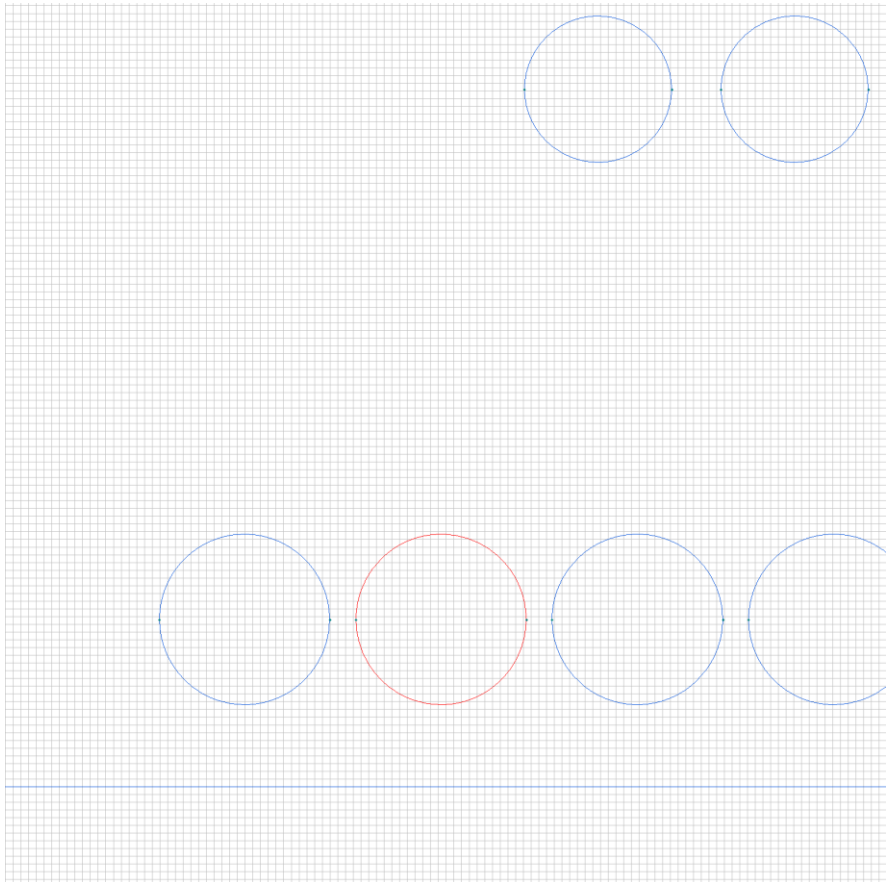
Voltage: U=0 V



Labelled objects: edge "current 10A"

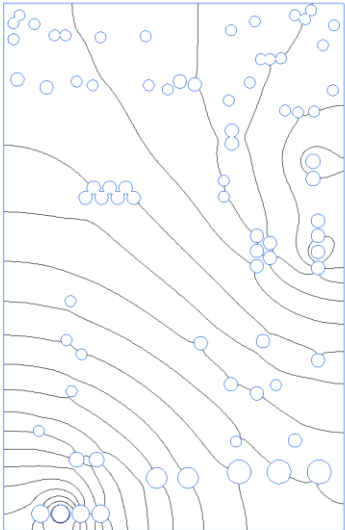
There are (2) objects with this label

Voltage: $U=0.01233$ V



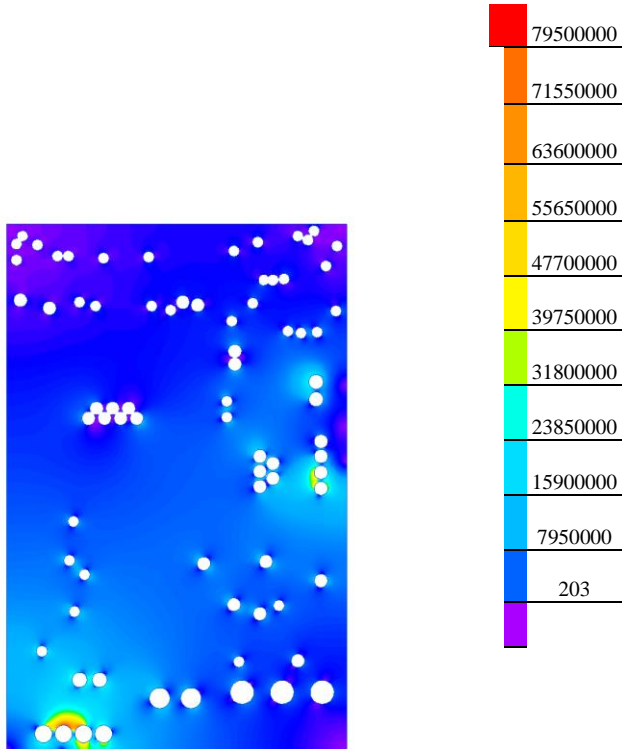
Results

Field lines



Results

Color map of Current density $|j|$ [A/m²]



Nonlinear dependencies

No non-linear dependencies are used in this problem data