Problem info

Problem type: Transient Magnetics (integration time: 10 s.)
Geometry model class: Plane-Parallel
Problem database file names:

- Problem: *two_membrane_Transient.pbm*
- Geometry: *Two_membrane_transient.mod*
- Material Data: *Two_membrane_transient.dms*
- Material Data 2 (library): *none*
- Electric circuit: *two_membrane_Transient.qcr*

Results taken from other problems:

- *none*

Geometry model

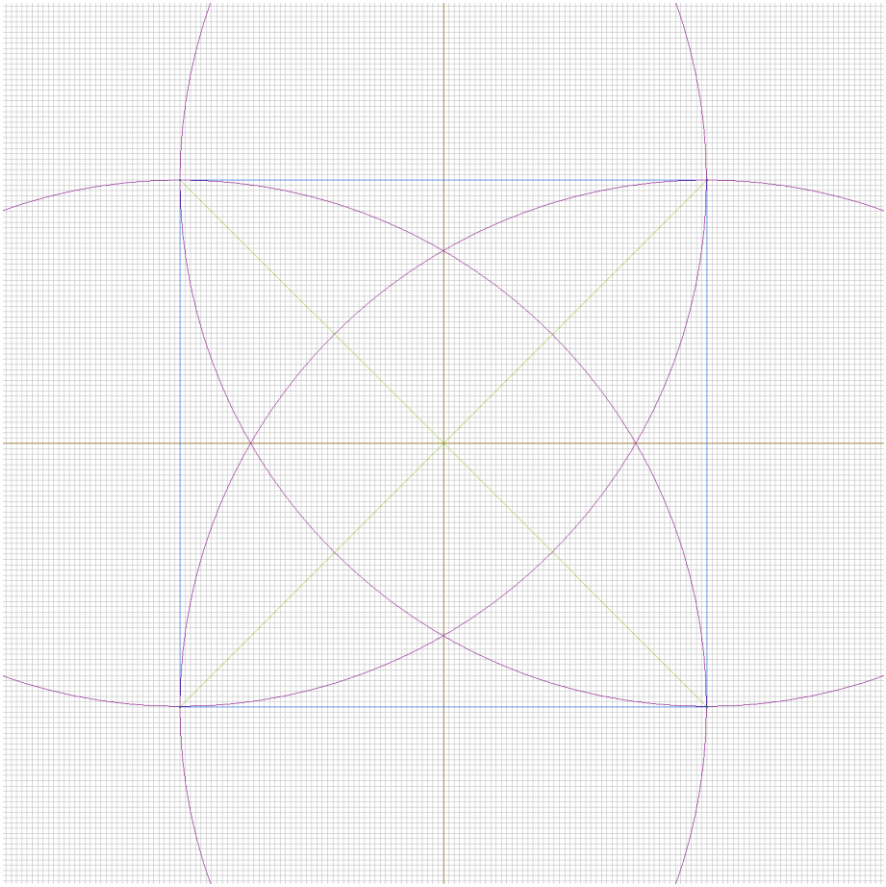


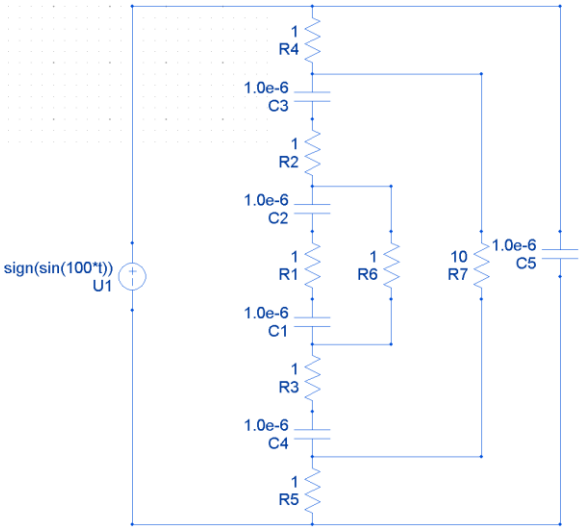
Table 1. Geometry model statistics

	With Label	Total
Blocks	1	1
Edges	1	4
Vertices	0	4

Number of nodes: 5.

Electric circuit

Coupled electric circuit



Circuit elements:

Capacitor C1=0.000001 [F]
Resistor R1=1 [Ohm]
Capacitor C2=0.000001 [F]
Resistor R2=1 [Ohm]
Resistor R3=1 [Ohm]
Capacitor C3=0.000001 [F]

Capacitor C4=0.000001 [F]
Resistor R4=1 [Ohm]
Resistor R5=1 [Ohm]
Resistor R6=1 [Ohm]
Resistor R7=10 [Ohm]
Capacitor C5=0.000001 [F]
Voltage source U1=sign(sin(100*t)) [V]

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)

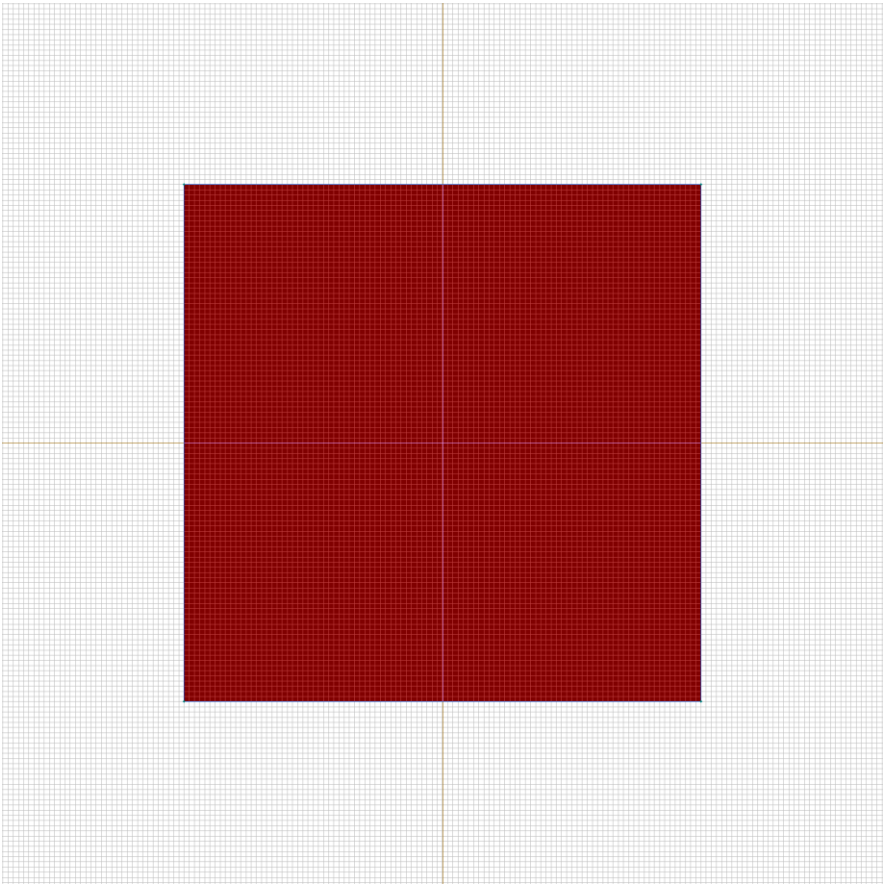
Blocks:	Edges:	Vertices:
• air •	• edge •	

Detailed information about each label is listed below.

Labelled objects: block "air"

There are (1) objects with this label

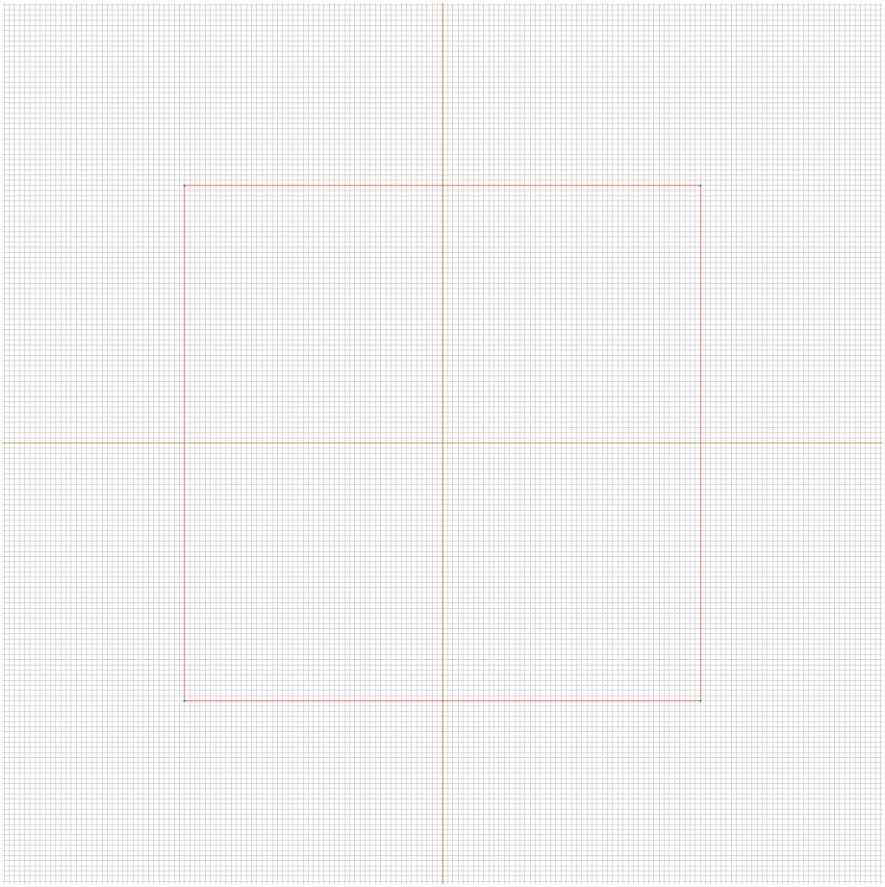
Relative magnetic permeability: mu_x=1, mu_y=1
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: edge "edge"

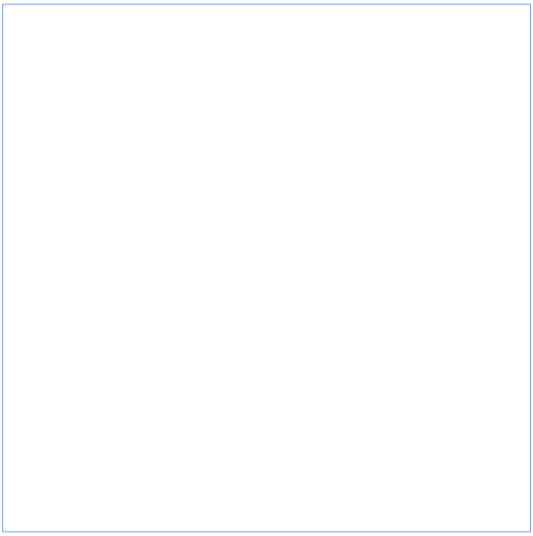
There are (4) objects with this label

Magnetic potential: A=0 [Wb/m]



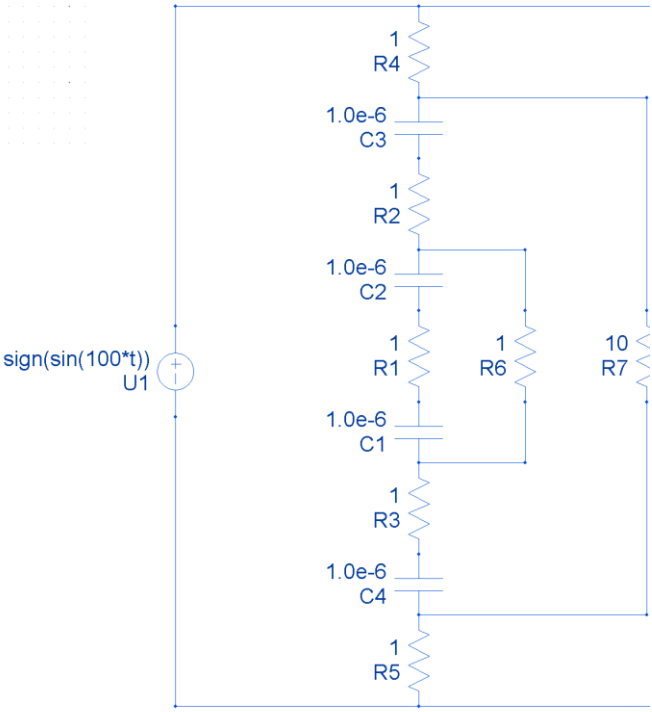
Results

Field lines



Results

Electric circuit currents



Circuit elements:

C1. I=1.0289E-33 [A]

R1. I=9.63E-34 [A]

C2. I=1.0029E-33 [A]

R2. I=5.009E-34 [A]

R3. I=0 [A]

C3. I=0 [A]

C4. I=0 [A]

R4. I=0.08333 [A]

R5. I=0.08333 [A]

R6. I=5.009E-34 [A]

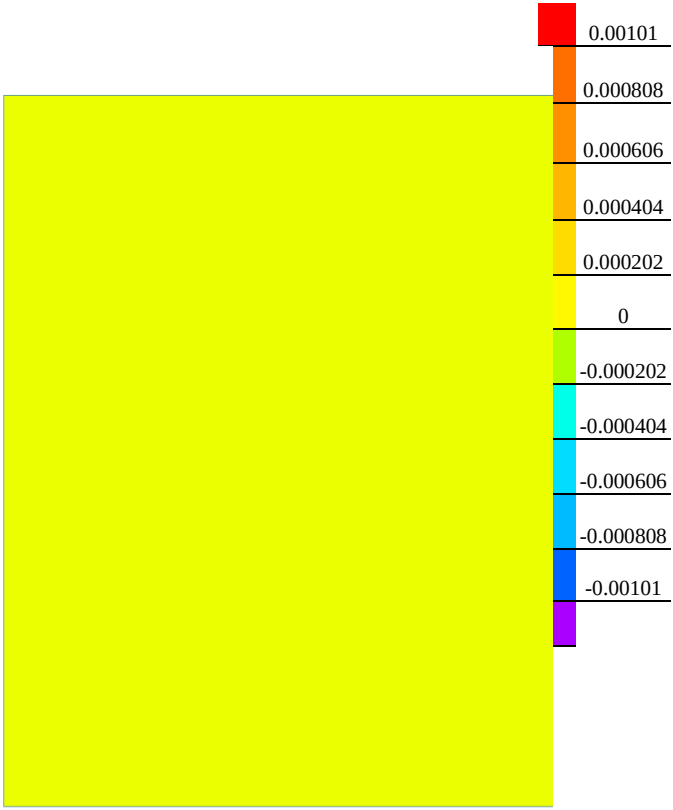
R7. I=0.08333 [A]

C5. I=0 [A]

U1. I=0.08333 [A]

Results

Color map of Strength |H| [A/m]



Nonlinear dependencies

No non-linear dependencies are used in this problem data