Our engineers use the accurate **finite element method** (FEM) to solve static, frequency-domain, and time-varying electromagnetic and electric fields.

FEATURES

- Evaluates and visualises electromagnetic properties that are otherwise hard to calculate.
- Enables design of experiment "electronically" through parametric modeling.
- Integrates with Simplorer, which is a system simulation software from ANSYS®.
- Combines complex circuits with accurate magnetic models.

BENEFITS

- More accurate designs.
- Reduces design iterations.
- Improves time to market.
- Quickly provides multiple design solutions for optimal performance.
- Saves prototype cost for each iteration.
- Seamless integration to customer's circuit level simulation.

TT Electronics

WHO WE ARE

We are a global provider of engineered electronics for performance critical applications.

We specialise in sensing, power, connectivity and manufacturing solutions providing mission-critical electronics suitable for the harshest environments.

800.749.3677 1700 FREEWAY BLVD MINNEAPOLIS, MN 55430 WWW.TTELECTRONICS.COM

TT Electronics

Engineering Smarter Solutions Together

Simulation In Action

Finite element analysis software helps our engineers to design and evaluate solutions to meet your specifications.

TT Electronics

WE DO AMAZING THINGS
FROM CONCEPT TO REALITY

TT Electronics uses industry leading finite element analysis software to simulate electromagnetic performance in much the same way that FEA software simulates multiphysics parameters. This lets our engineers see how a particular design will work before we even begin to build it.

Welly Chou
Design Engineering Manager

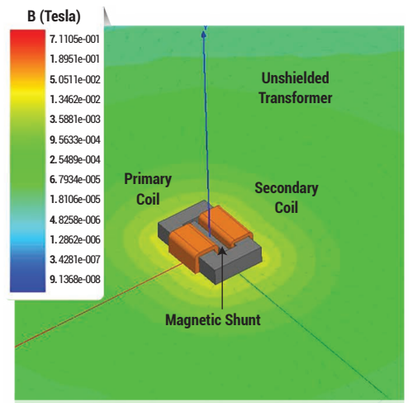
Integrated Magnetics
For Soft Switching Applications

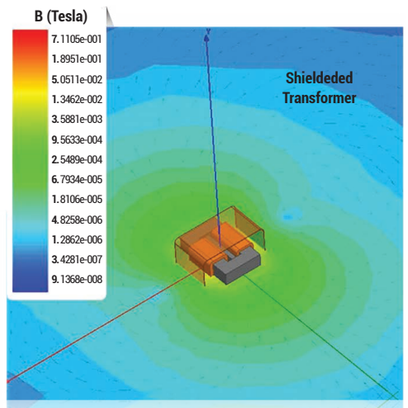
PROBLEM

Design a 5kW transformer with integrated leakage inductance for soft-switching. High leakage inductance (120µH) demands leakage flux generation, redirection & management.

SOLUTION

Designed a magnetic shunt in the transformer to redirect leakage flux. Designed a critically spaced and sized copper shield to ensure stable leakage inductance.





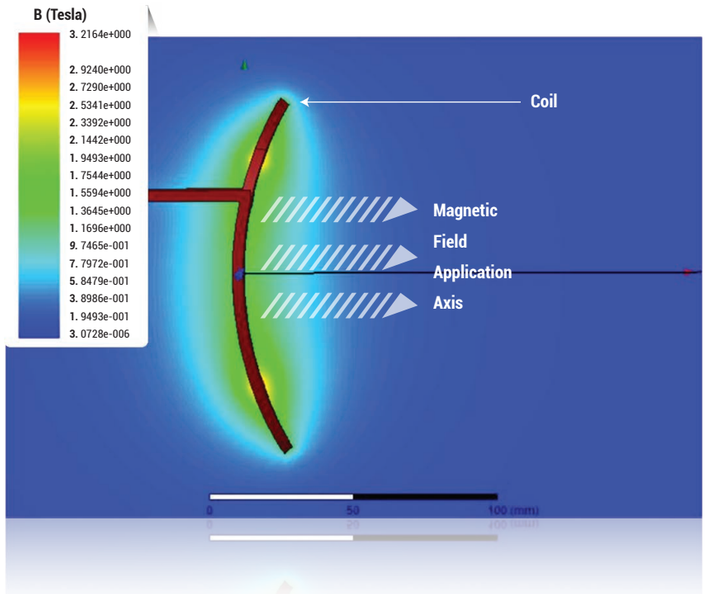
High Intensity Magnetic Field
Generation For Medical Applications

PROBLEM

Design a uniquely shaped coil for a transcranial magnetic stimulation (TMS) device to generate a precise high magnetic field at close proximity.

SOLUTION

Utilised finite element method (FEM) to analyse field strength along the application axis and design the coil accordingly.



3 Axis Coil With
Tight Inductance Tolerances

PROBLEM

Design and manufacture a 3-axis coil that maintain ± 1% inductance tolerance among X, Y, and axes.

SOLUTION

Conducted DoE with FEM to understand and mitigate factors affecting inductance such as core dimension and winding width.