

# Multi E-Shield™ to Reduce Displacement Current & EMI

## ■ Description

- ▶ Conductive metal-foil shield between input and output windings
- ▶ Core cancellation winding between the core and input winding; one end connected to the input winding and other end is floating
- ▶ A second cancellation winding connected to input ground with the other end floating and surrounds the output winding

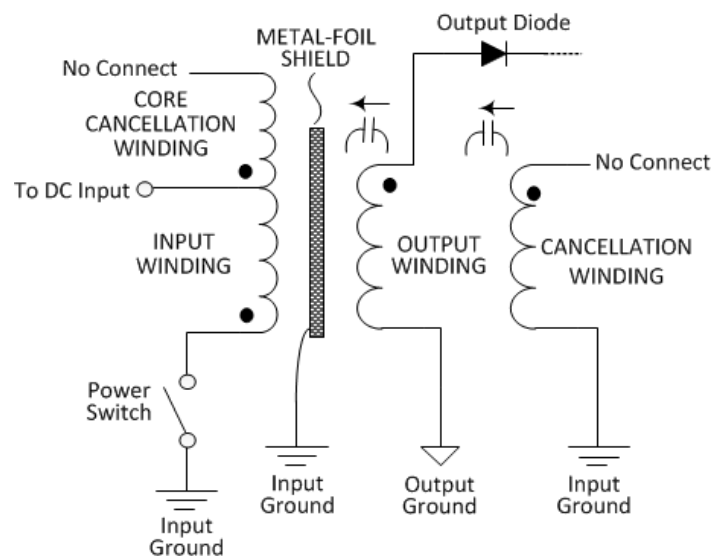


Figure 1. Electrical coupling of transformer windings with multi E-Shield

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## ■ Benefits

- ▶ May save space, size and cost of the printed circuit board (PCB) by:
  - Eliminates external electromagnetic interference (EMI) filter
  - Eliminates Y-capacitor and some resistors
- ▶ **Could be used with:** flyback converters to reduce displacement current between input and output windings

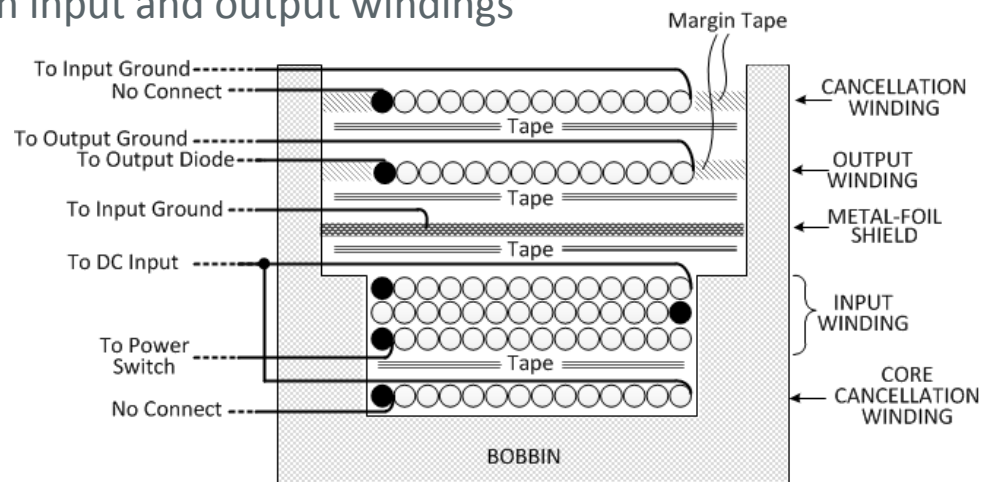


Figure 2. Transformer winding structure with multi E-Shield