

# Advanced E-Shield™ with Multi-Balance Windings in Multi-Output Transformer

## ■ Description

- ▶ Multi-output transformer structure with improved electromagnetic interference (EMI) performance
- ▶ Blocks displacement current from input to all output windings by using:
  - Core cancellation winding connected to input winding with the other end floating
  - Input balance winding connected to the input winding
  - Output balance winding connected to the common terminal of multi-output windings
  - Input and output balance windings positioned next to each other on the core with floating end terminals (No Connect, NC)
  - Multi-output windings are interleaved on the core

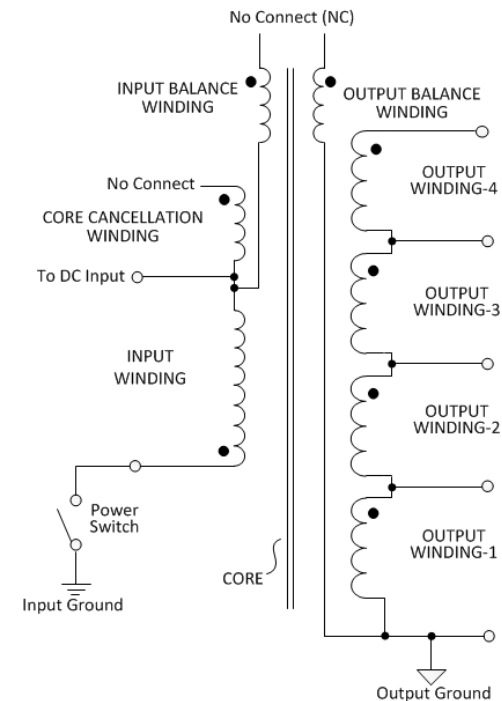


Figure 2. Electrical coupling of multi-output transformer windings with multi-balance windings

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## ■ Benefits

- ▶ Saves on space, size and cost of printed circuit board (PCB) compared to conventional solutions by:
  - Eliminating the external EMI filter components (common mode choke and/or the X-capacitor)
  - Eliminates the Y-capacitor and possibly two resistors

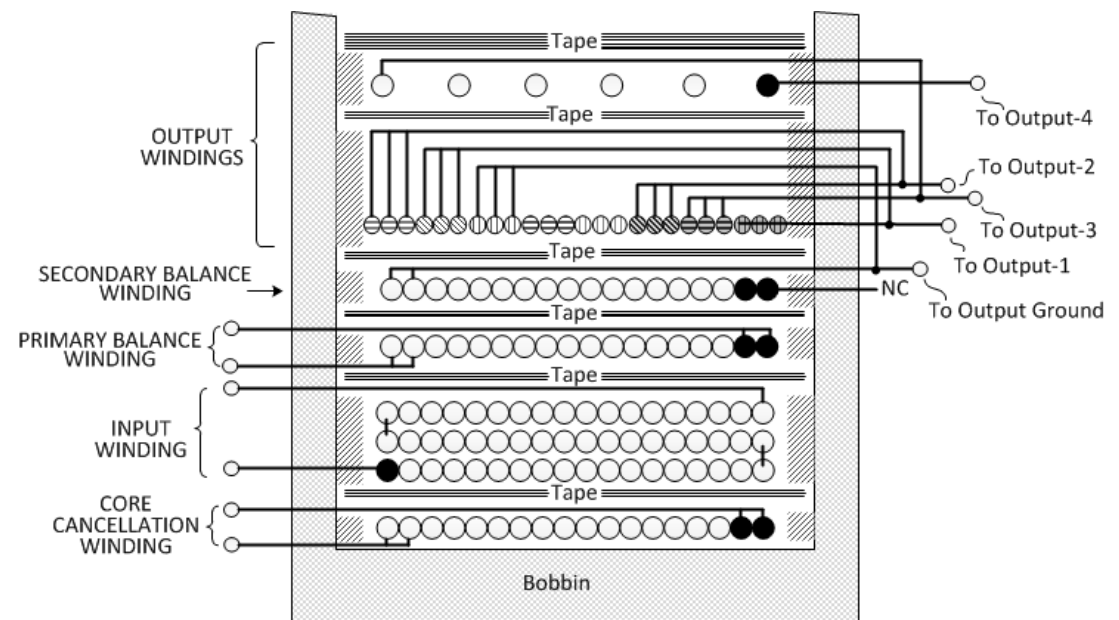


Figure 2. Multi-output transformer winding structure with multi-balance windings