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(54) **PLANAR TRANSFORMER ISOLATION  
CIRCUIT FOR AN X-RAY SOURCE**

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(57) **ABSTRACT**

In an x-ray source, an isolation circuit can isolate bias voltage at a cathode from a bias voltage at an alternating current source (AC source). The isolation circuit can transfer alternating current from the AC source to the cathode. The isolation circuit can be made repeatedly with minimal variation or failed parts, can be light, and can be small. The isolation circuit can include planar transformer(s). Each planar transformer can include a primary trace on a primary circuit board and a secondary trace on a secondary circuit board. The primary trace and the secondary trace can each include a spiral shape. The primary trace can be located in close proximity to the secondary trace such that alternating electrical current through the primary trace will induce alternating electrical current through the secondary trace.

