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## (12) United States Patent

### Hui et al.

#### (54) PLANAR PRINTED CIRCUIT-BOARD TRANSFORMERS WITH EFFECTIVE ELECTROMAGNETIC INTERFERENCE (EMI) SHIELDING

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- Int. Cl.<sup>7</sup> ..... H01F 5/00 (51)
- (52)
- Field of Search ...... 336/200, 223, (58)336/232; 29/602.1

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#### (45) Date of Patent: May 3, 2005

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#### (57)ABSTRACT

Novel designs for printed circuit board transformers, and in particular for coreless printed circuit board transformers designed for operation in power transfer applications, in which shielding is provided by a combination of ferrite plates and thin conductive sheets.

#### 7 Claims, 8 Drawing Sheets



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Fig. 2.

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Fig. 3a.



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Fig. 3b.







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