

(12) **United States Patent**
Suzuki et al.

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- (54) **MULTILAYER LAMINATED CIRCUIT BOARD**
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- (73) Assignee: **Tamura Corporation**, Tokyo (JP)
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- (51) **Int. Cl.**
H01F 5/00 (2006.01)

- (52) **U.S. Cl.** 336/200; 336/223; 336/232
(58) **Field of Classification Search** 336/200, 336/232, 223
See application file for complete search history.

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Primary Examiner—Anh T Mai

(57) **ABSTRACT**

A multi-layer laminated circuit board 10A of the present invention is formed by laminating together a multi-layer transformer 10, a multi-layer part sheet 30 formed with a multi-layer part, and a wiring sheet 50 formed with a circuit pattern. The multi-layer transformer 10 is incorporated into the multi-layer laminated circuit board 10A, and therefore a package for the multi-layer transformer 10 is omitted, and the wiring between the multi-layer transformer 10 and other components is reduced to a minimum.

13 Claims, 14 Drawing Sheets

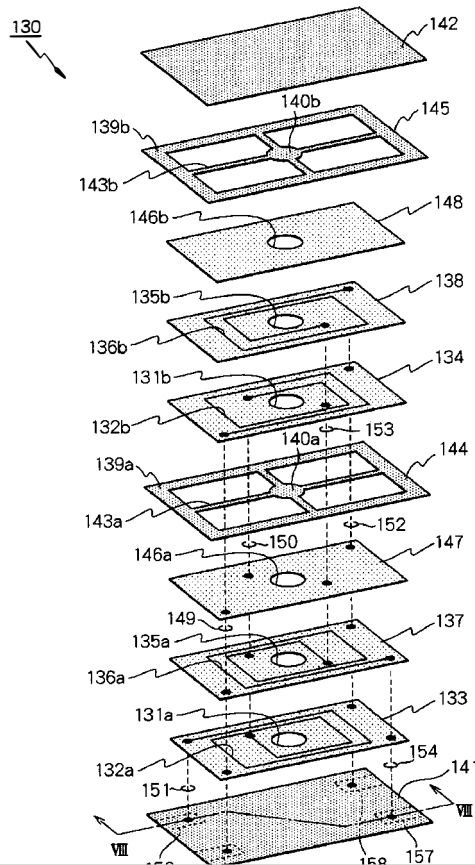
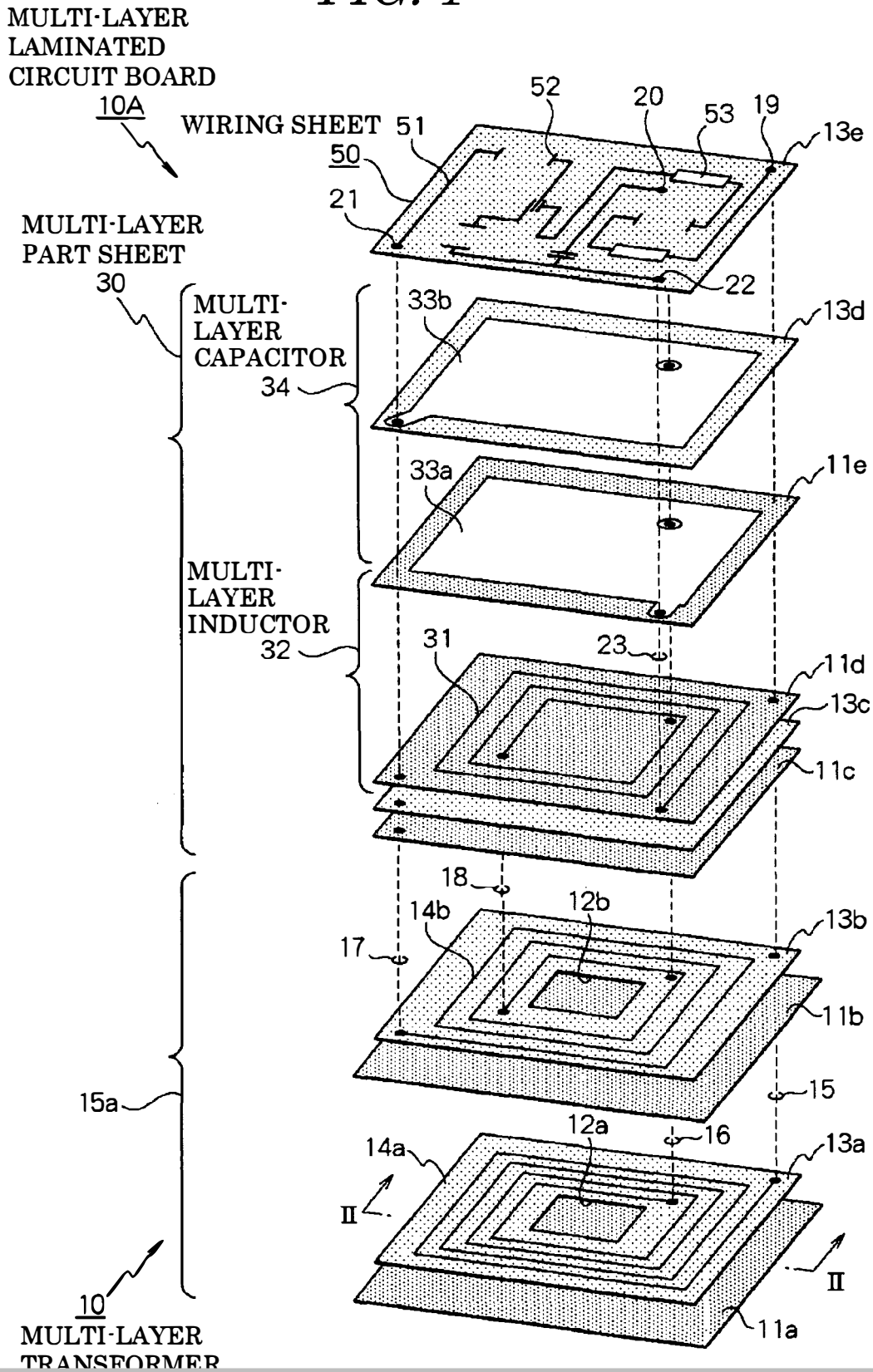


FIG. 1



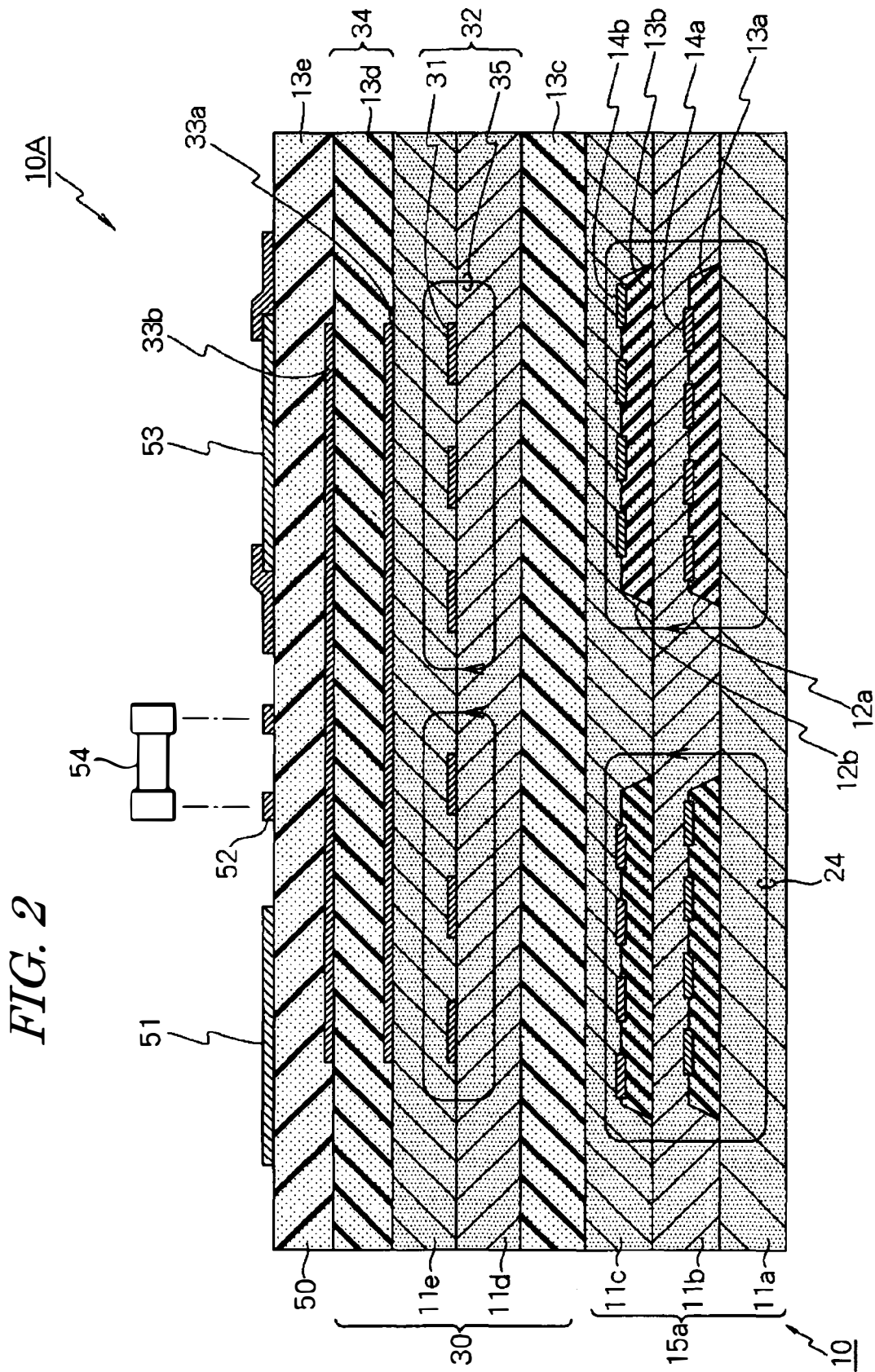


FIG. 2

FIG. 3

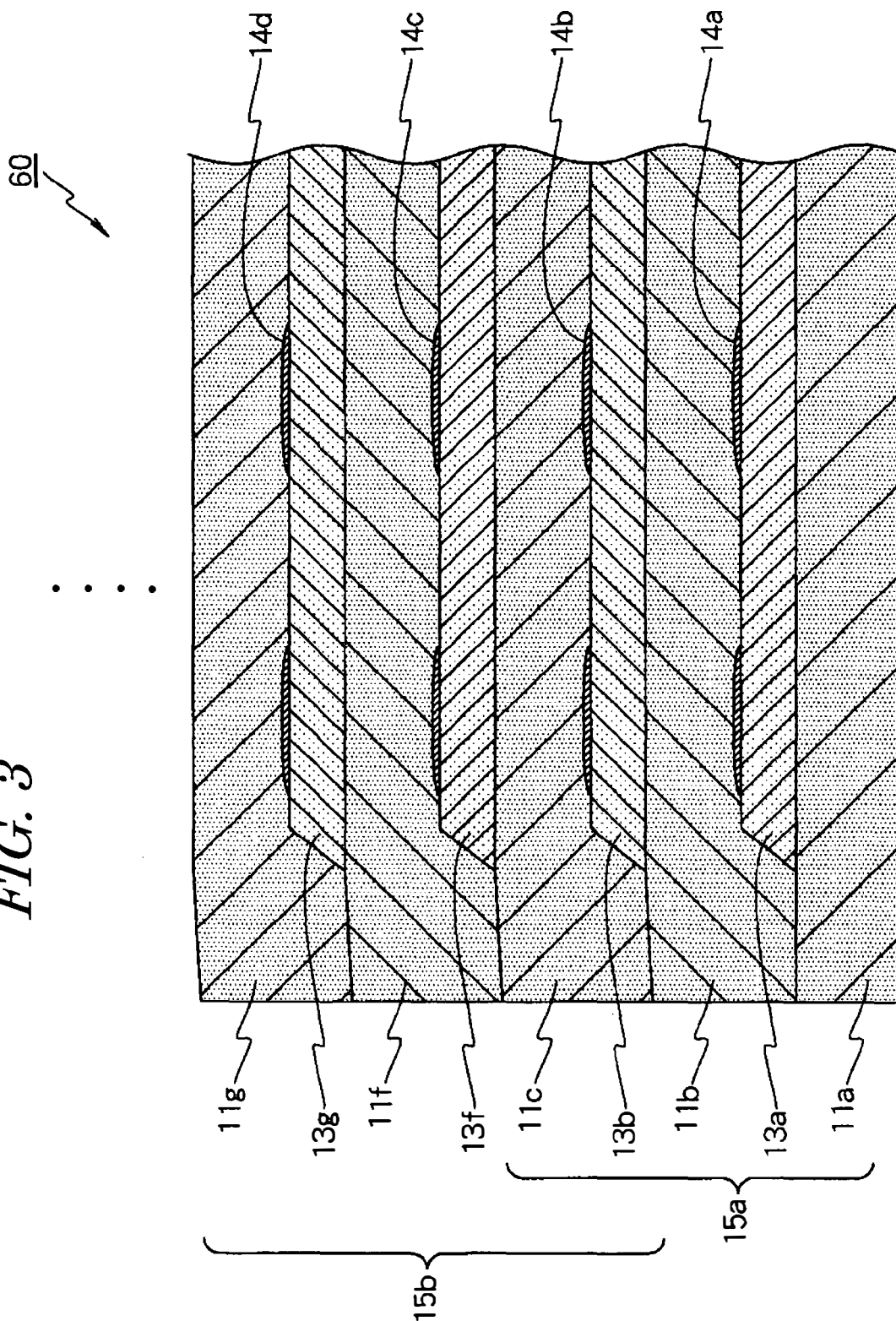
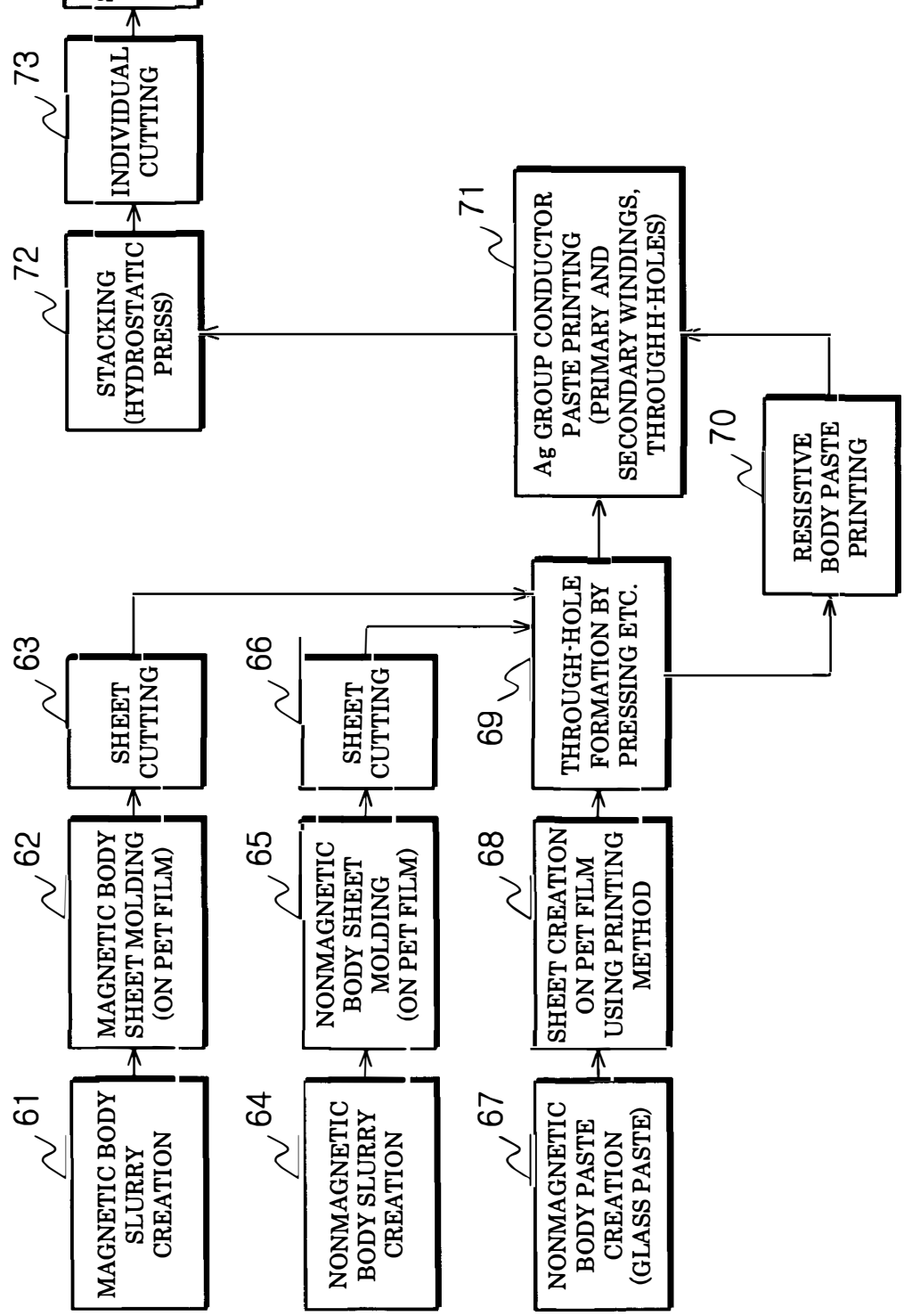


FIG. 4



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