

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

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(54) **MEDICAL DEVICES INCLUDING FLEXIBLE CIRCUIT BODIES WITH EXPOSED PORTIONS OF CIRCUIT TRACES ATTACHED TO ELECTRICAL CONTACTS OF COMPONENTS**

USPC 607/72, 116
See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 247 days.

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(57) **ABSTRACT**

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Medical devices include stimulation and/or sensing circuitry that is interconnected to electrical components by a flexible circuit body having exposed portions of circuit traces that are attached to electrical contacts of the electrical components. Each circuit trace may span a separate window formed in an insulative body of the flexible circuit body, or a plurality of circuit traces may span a single window or may be freely extending from the insulative body. The exposed portion of the circuit trace may be plated with a conductive metal and then attached to the electrical contact of the electrical component. The flexible circuit body may be an extension from a flexible electrical circuit board containing the circuit. The circuit may be present on a circuit board that includes electrical contacts and where the flexible circuit body has exposed portions of circuit traces attached to the electrical contacts of the circuit board.

(65) **Prior Publication Data**

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A61N 1/375 (2006.01)

(52) **U.S. Cl.**
CPC **A61N 1/3752** (2013.01); **Y10T 29/49117** (2015.01)

(58) **Field of Classification Search**
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24 Claims, 7 Drawing Sheets

