United States Patent [19]

Sugata et al.

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[54] **HEAT-GENERATING RESISTOR AND HEAT-GENERATING RESISTANCE ELEMENT USING SAME**

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[52] **U.S. Cl.** **428/408**; 219/553; 338/308; 338/314

[58] **Field of Search** 428/408; 427/39; 338/308, 309, 314; 252/502; 219/553

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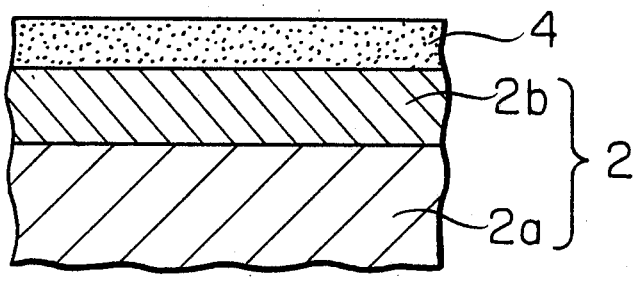
[57] **ABSTRACT**

A heat generating resistor having a functional thin film comprising an amorphous material containing halogen atoms and hydrogen atoms non-uniformly distributed in a matrix of carbon atoms formed on a substrate. Optionally, the thin film also contains silicon and/or germanium, and a substance for controlling the electroconductivity of the thin film. The optional ingredients are also non-uniformly distributed within the thin film.

29 Claims, 4 Drawing Sheets