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(54) **MICROSTRUCTURES**

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(52) **U.S. Cl.** **438/800; 438/119; 438/455; 438/54; 257/682**

(58) **Field of Search** **438/800, 119, 438/54, 55, 456, 64, 67, 455-457; 257/682, 698, 731, 760, 678, 798**

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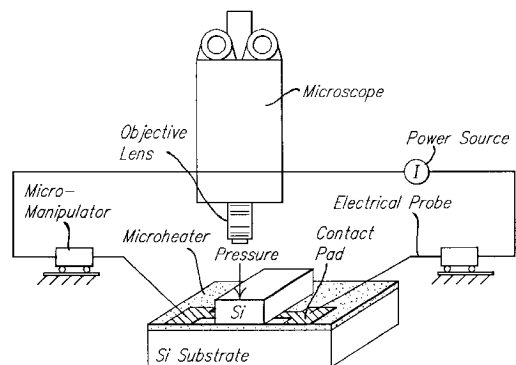
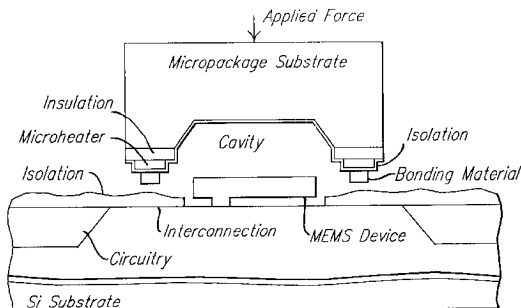
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(57) **ABSTRACT**

A method for making a microstructure assembly, the method including the steps of providing a first substrate and a second substrate; depositing an electrically conductive material on the second substrate; contacting the second substrate carrying the electrically conductive material with the first substrate; and then supplying current to the electrically conductive material to locally elevate the temperature of said electrically conductive material and cause formation of a bond between the first substrate and the second substrate.

15 Claims, 9 Drawing Sheets



- Gold Microheater
- Silicon Dioxide
- Silicon