

Microarray bioprobe device integrated with an amplifier having bottom-gate  
thin film transistors

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### Abstract

The present invention provides a microarray bioprobe device integrated with an amplifier having bottom-gate thin film transistors. The present invention utilizes a micro-electro-mechanical process as well as a semiconductor process to integrate microarray bioprobes and an amplifier having bottom-gate thin film transistors on a flexible substrate. As such, a signal obtained by the microarray bioprobes can be amplified nearby to improve the signal-to-noise ratio and impedance matching. The microarray bioprobes are formed on the flexible substrate such that the present microarray bioprobe device can be disposed to conform to the profile of a living body's portion so as to improve electrical contact between the bioprobes and the living body's portion.

Keyword : Microarray probe