

UPDATE FROM THE CUTTING EDGE

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Information Technology

Manufacturing of radio frequency ID tags on flexible films using an all printing process

Development of a technique to fabricate very low-cost radio frequency ID tags

We have drastically reduced electrical resistance of antennae and wirings, etc. of radio frequency (RF) ID tags, which are produced using a screen printing method. After printing an antenna and wirings with metallic inks, a pressure annealing technique is applied at low temperature, instead of ordinary high temperature baking. All-screen-printed RF ID tags on flexible films were realized using the pressure annealing technique. The technique will lead to further reduction of manufacturing cost of RF ID tags and acceleration of wide use of them.

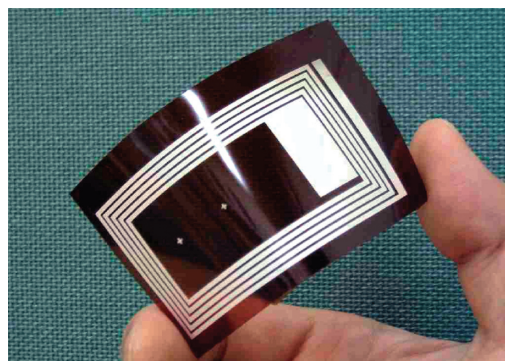


Figure 1: Screen-printed antenna for a RF ID tag.



Figure 2: Demonstration of object identification using all-screen-printed RF ID tags on flexible plastic substrates.

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