

Microswitches with Sputtered Au, Aupd, Au-on-Aupt, and Auptcu Alloy - Electric Contacts

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Abstract : This paper to report on a new analytic model for predicting microcontact resistance and the design, fabrication, and testing of microelectromechanical systems (MEMS) metal contact switches with sputtered bimetallic (i.e., gold (Au)-on-Au-platinum (Pt), (Au-on-Au-(6.3at%Pt)), binary alloy (i.e., Au-palladium (Pd), (Au-(3.7at%Pd))), and ternary alloy (i.e., Au-Pt-copper (Cu), (Au-(5.0at%Pt)-(0.5at%Cu)) electric contacts. The microswitches with bimetallic and binary alloy contacts resulted in contact resistance values between 1-2

Keywords : alloys, electric contacts, microelectromechanical systems (MEMS), microswitch

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