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Mechanical Behavior of Electroplated Copper Deposited on thin Polymer Substrates

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Abstract

Tensile tests were performed on specimens consisting in electroplated thin copper films and structures, deposited on polyimide type substrates. Two aspects of reliability issues have been addressed on this sort of film on substrate systems: -one corresponds to the degradation of a film on a substrate, when submitted to several cyclic mechanical solicitations; the other one, - corresponds to the effect produced by geometrical and material discontinuities at the interfaces, on the local stress fields. In our case at the contours of the copper structures in contact with their polyimide substrate.

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