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INTEGRATED CIRCUIT CHIP WIRING STRUCTURE WITH CROSSOVER CAPABILITY AND METHOD OF MANUFACTURING THE SAME

ABSTRACT

A wiring structure with crossover capability is disclosed. The wiring utilizes a connection stud (16) in a contact layer, beneath the plane of the otherwise-intersecting lines as a crossover. Thus, a first wire (12) in a first metallization layer passes below a second wire (14) in a second metallization layer by overlapping contact with the connection stud (16) in the contact layer. In manufacturing the wiring structure of the present invention, no intervening insulative or via layers are used between the contact layer, the first metallization layer and the second metallization layer. However, care must be taken in device layout on the substrate to ensure that the connection stud (16) is located above isolation areas rather than active device areas.

Fig. 6

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