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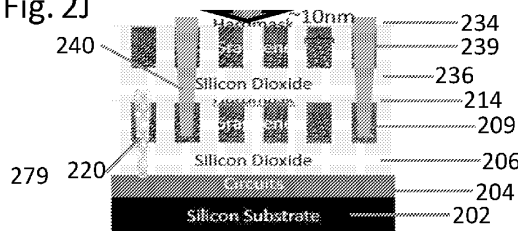
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(54) Title: GRAPHENE BEOL INTEGRATION INTERCONNECTION STRUCTURES

Fig. 2J



(57) Abstract: An interconnection structure, including: a first BEOL(Back-End-Of-Line) level which includes a first MLG(Multi-Layer Graphene) layer which includes at least one first line structure of MLG material; and a first isolation layer which includes an electrically isolating material and is disposed above and beside the at least one first line structure of MLG material; a second BEOL level which includes a second MLG layer(includes MLG material) disposed above the first isolation layer; a connection path electrically connecting first MLG layer to second MLG layer; and at least one via with serrated edges mitigating misalignment impacts and providing low via to line contact resistance, where the connection path includes one of the at least one via, where a width of the at least one first line structure of MLG material is greater than a diameter of the one of the at least one via, and where both MLG layers are intercalation doped.

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