

Layout influence on microwave performance of graphene field effect transistors

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The authors report on an in-depth statistical and parametrical investigation on the microwave performance of graphene FETs on sapphire substrate. The devices differ for the gate-drain/source distance and for the gate length, having kept instead the gate width constant. Microwave *S*-parameters have been measured for the different devices. Their results demonstrate that the cut-off frequency does not monotonically increase with the scaling of the device geometry and that it exists an optimal region in the gate-drain/source and gate-length space which maximises the microwave performance.