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(54) **METAL GATE CUT WITH HYBRID MATERIAL FILL**

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(57) **ABSTRACT**

Techniques are provided herein to form semiconductor devices that include one or more gate cuts having a hybrid material structure. A semiconductor device includes a gate structure around or otherwise on a semiconductor region. The gate structure includes a gate dielectric and a gate electrode. The gate structure may be interrupted, for example, between two transistors with a gate cut that includes a hybrid structure having both a low-k dielectric material and a high-k dielectric material. The gate cut includes an outer layer having a high-k dielectric material and a dielectric fill on the dielectric layer having a low-k dielectric material. The inclusion of low-k dielectric material reduces the parasitic capacitance between adjacent conductive layers around or within the gate cut.