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(54) **INTEGRATED CIRCUIT DEVICES AND
METHODS FOR MAKING SUCH DEVICES**

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ABSTRACT

An integrated circuit device and method for forming the integrated circuit device are provided. The method includes: a) forming a semiconductor device on a frontside of a substrate comprising: a device layer on the frontside of the substrate, the device layer comprising a first active device, the substrate comprising: shallow trench isolation structures and a via filled with a sacrificial plug extending through the substrate material in a first separating portion; b) removing the substrate material from a backside of the substrate; c) depositing a liner covering the backside of the substrate; d) anisotropically etching the liner so as to expose a first end of the sacrificial plug, while retaining at least part of the liner in the separating portions; e) removing the sacrificial plug selectively with respect to the liner; and f) providing an electrically conductive material in the via, electrically coupled to a buried power rail.

