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(54) THREE-DIMENSIONAL METAL-INSULATOR-METAL CAPACITOR EMBEDDED IN SEAL STRUCTURE

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(57)ABSTRACT

Embodiments of the present invention are directed to methods and resulting structures for integrated circuits having metal-insulator-metal (MIM) capacitors that serve as both decoupling capacitors and crack stops. In a non-limiting embodiment, an interconnect is formed on a first portion of a substrate in an interior region of the integrated circuit. A second portion of the substrate is exposed in an edge region of the integrated circuit. A MIM capacitor is formed over the second portion of the substrate in the edge region. The MIM capacitor includes two or more plates and one or more dielectric layers. Each dielectric layer is positioned between an adjacent pair of the two or more plates and a portion of the two or more plates extends over the interconnect in the interior region. A plate of the two or more plates is electrically coupled to a last metal wiring level of the interconnect.

