

METHOD TO FABRICATE MIM CAPACITOR USING DAMASCENE PROCESS

ABSTRACT OF THE DISCLOSURE

In one embodiment, the present invention recites forming a number
5 of first openings in a first substrate. The present embodiment then recites
forming a copper region within each first openings during a damascene
process, wherein each copper region has a top surface. The present
embodiment then disposes a dielectric layer proximate to the top surface of
each of the first copper regions during the damascene process. After
10 depositing a second substrate over the dielectric, a number of second
openings in a second substrate are made. Next, a number of second copper
regions are formed in the second openings, during the damascene process.
The dielectric region is thus disposed between the first copper regions and
the second copper regions. In so doing, the dielectric region forms a
15 dielectric barrier between the first copper regions and the second copper
regions such that a metal-insulator-metal (MIM) capacitor is formed
during a damascene process.

FIGURE 1



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