SEMICONDUCTOR STRUCTURE INCLUDING ISOLATION REGION WITH VARIABLE LINEWIDTH AND METHOD FOR FABRICATION THEROF

ABSTRACT OF THE DISCLOSURE

A semiconductor structure includes a base semiconductor substrate having a doped region located therein, and an epitaxial region located over the doped region. The semiconductor structure also includes a final isolation region located with the doped region and the epitaxial region. The final isolation region has a greater linewidth within the doped region than within the epitaxial region. A method for fabricating the semiconductor structure provides for forming the doped region prior to the epitaxial region. The doped region may be formed with reduced well implant energy and reduced lateral straggle. The final isolation region with the variable linewidth provides a greater effective isolation depth than an actual trench isolation depth.

Fig. 9