## A B S T R A C T

A high density substrate plate trench DRAM cell memory device and process are described in which a buried region (32) is formed adjacent to deep trench capacitors such that the substrate region of DRAM transfer FETs can be electrically isolated from other FETs on a semiconductor substrate (10). The buried region (32) is partially formed by ion implantation and diffusion to intersect the walls of the deep trenches (22). The buried region (32) is contacted along its perimeter by a reach through region to complete the isolation. The combined regions reduce charge loss due to better control of device parasitics.



This Sheet Has Been Replaced

