

**HIGH RESISTIVITY SILICON-ON-INSULATOR SUBSTRATE
HAVING ENHANCED CHARGE TRAPPING EFFICIENCY**

ABSTRACT

A multilayer semiconductor on insulator structure is provided in which the handle substrate and an epitaxial layer in interfacial contact with the handle substrate comprise electrically active dopants of opposite type. The epitaxial layer is depleted by the handle substrate free carriers, thereby resulting in a high apparent resistivity, which improves the function of the structure in RF devices.

FIG. 3E