

ABSTRACT

SEMICONDUCTOR DIODE WITH REDUCED LEAKAGE

A diode 100 is formed on a silicon-on-insulator substrate that includes a silicon layer overlying an insulator layer 142. An active region is formed in the silicon layer and includes a p-doped region 108 and an n-doped region 106 separated by a body region 110. A high permittivity gate dielectric 114 overlies the body region 110 and a gate electrode 112 overlies the gate dielectric 114. As an example, the diode can be used for ESD protection.

FIG. 4