

ABSTRACT

SEMICONDUCTOR DEVICE AND METHOD
OF MANUFACTURING THE SAME

A semiconductor device including a MOS element (100) having a buried contact structure⁽²⁰⁾. The buried contact structure includes a first contact diffused region (22) formed by diffusion from a polycrystalline silicon layer and a second contact diffused region⁽²⁴⁾ formed by diffusion deeper than the first contact diffused region, so that a parasitic resistance of the MOS element can be reduced. In a composite element composed of the MOS element and a bipolar element, partly since the first contact diffused region and an emitter diffused region of the bipolar element can be formed simultaneously, and partly since the depth of connection of the emitter diffused region, with the parasitic resistance of the MOS element being reduced, it is possible to realize a high-speed operation.

Fig.1.