

SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE AND SEMICONDUCTOR
SWITCHING DEVICE USING THEREOF

Abstract

A semiconductor integrated circuit device having a plurality of semiconductor electronic members including a field effect transistor, intended for suppressing a sidegating effect on the field effect transistor, wherein accumulation of majority carriers of the field effect transistor is suppressed at the interface of heterojunction in the buffering compound semiconductor layer and the interface between the substrate and the buffering compound semiconductor layer in the device isolation region so that the discontinuity of energy forbidden bands of the semiconductors caused at the interfaces does not form a potential barrier upon conduction of the carriers into the substrate, whereby the sidegating effect from the resistor element, etc. placed adjacently to the field effect transistor can be decreased drastically.

(Fig.1)