

METHOD AND APPARATUS FOR A HETEROJUNCTION BIPOLAR TRANSISTOR USING SELF-ALIGNED EPITAXY

ABSTRACT

A heterojunction bipolar transistor (HBT), and manufacturing method therefor,
5 comprising a semiconductor substrate having a collector region, a number of insulating layers
over the semiconductor substrate, at least one of the number of insulating layers having a
base cavity over the collector region, a base structure of a compound semiconductive material
in the base cavity, a window in the insulating layer over the base cavity, an emitter structure
in the window, an interlevel dielectric layer, and connections through the interlevel dielectric
10 layer to the base structure, the emitter structure, and the collector region. The base structure
and the emitter structure preferably are formed in the same processing chamber.

Figure 14