

PROCESS FOR FORMING A SILICON-GERANIUM BASE OF
A HETEROJUNCTION BIPOLAR TRANSISTOR

ABSTRACT

A process for forming a silicon-geranium base of a heterojunction bipolar transistor. First, a silicon substrate (10) having a mesa (12) surrounded by a trench (16) is formed. Next, a silicon-geranium layer (20) is deposited on the substrate (10) and the portion of the silicon-geranium layer (20) adjacent the mesa (12) is removed to form the silicon-geranium base (22). In a second embodiment, the process comprises the steps of forming a silicon substrate (10) having a mesa (12), and growing a silicon-geranium layer (20) on the mesa (12) top surface (14) using selective epitaxial growth to form the silicon-geranium base (22).

FIG. 7