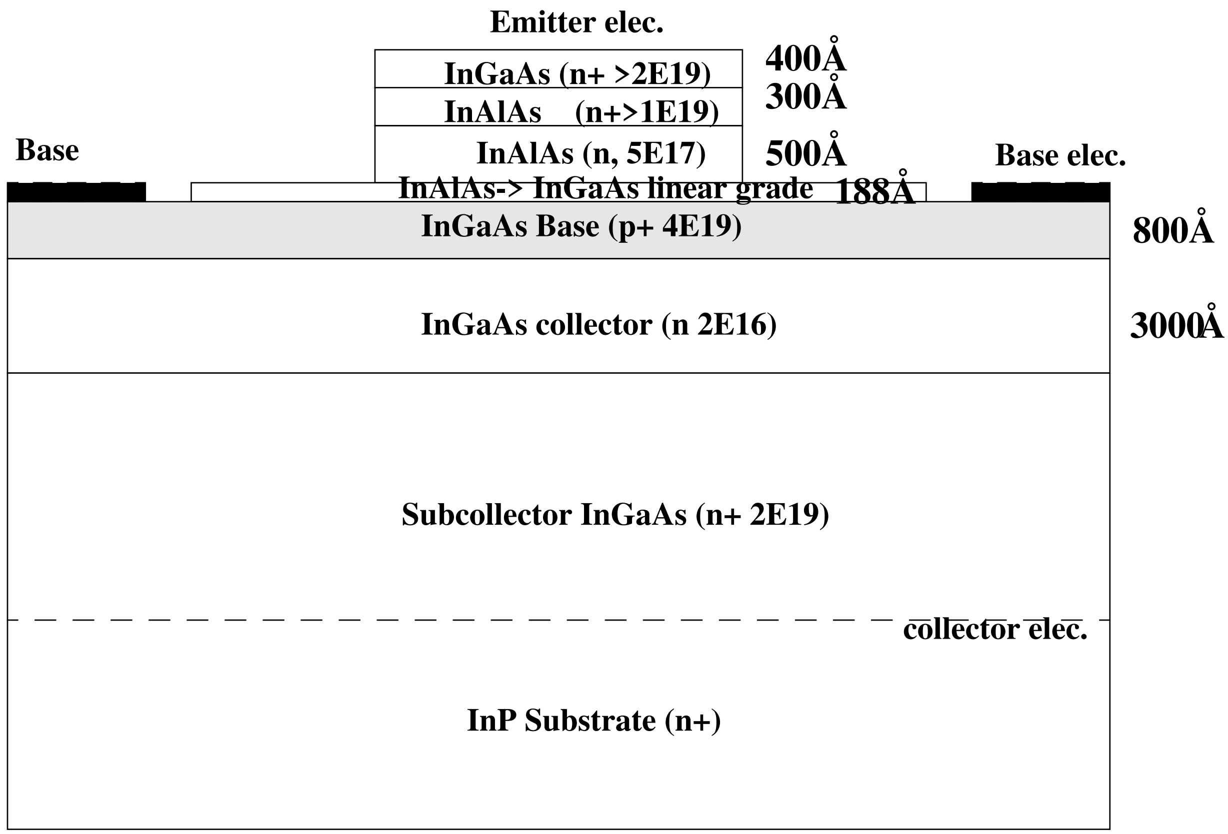


Fig. 6. InAlAs/InGaAs/InGaAs HBT structure

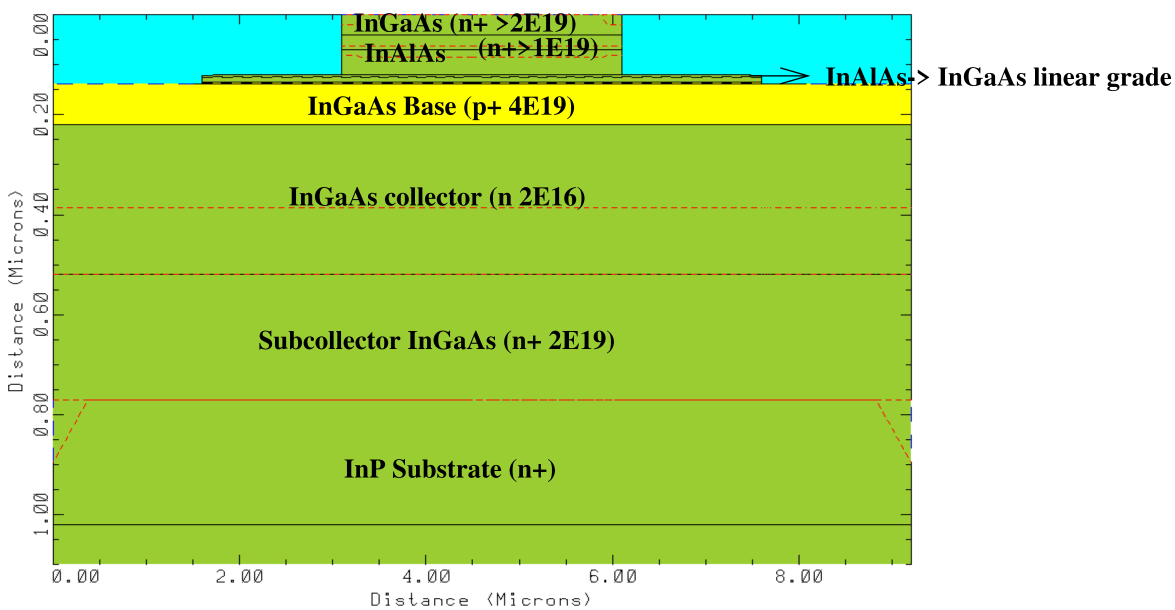
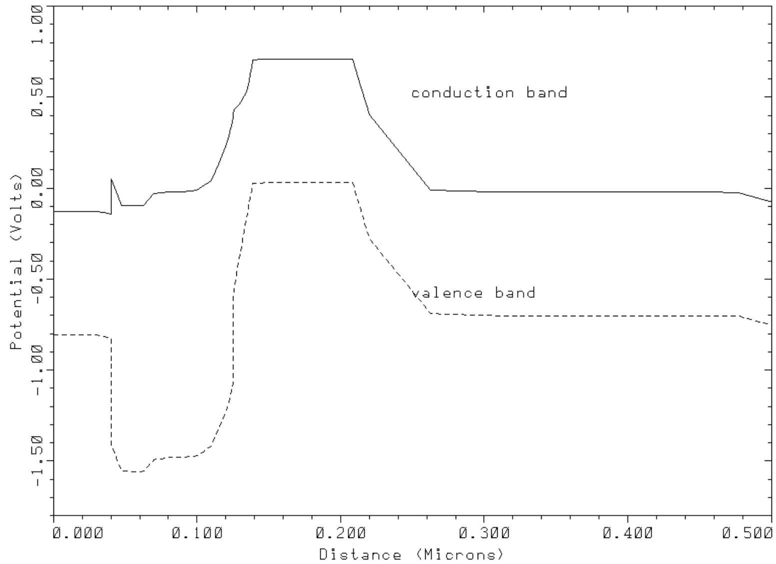
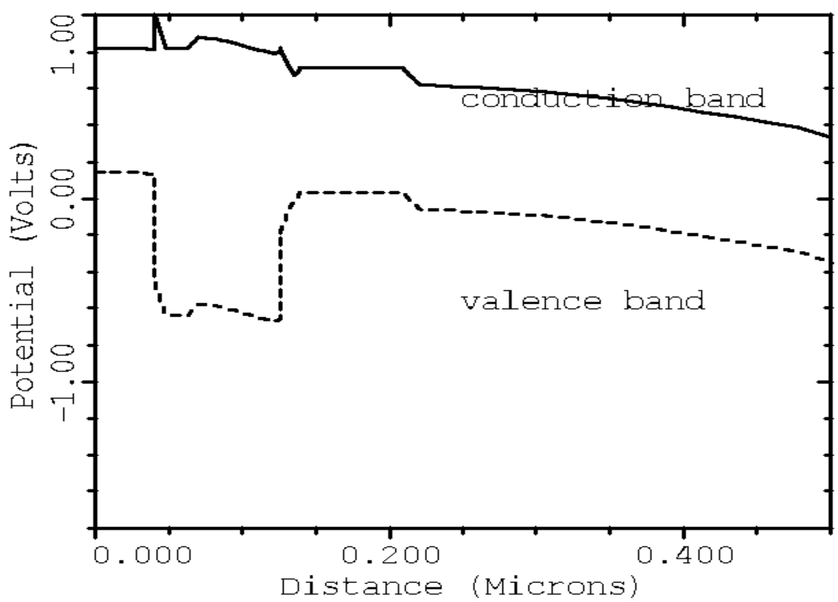


Fig. 7. Simulation structure of InAlAs/InGaAs/InGaAs HBT



(a) at equlibrium state



(b) at Vce=Vbe=1V

Fig. 8. Band diagrams of . InAlAs/InGaAs/InGaAs HBT at the equilibrium state

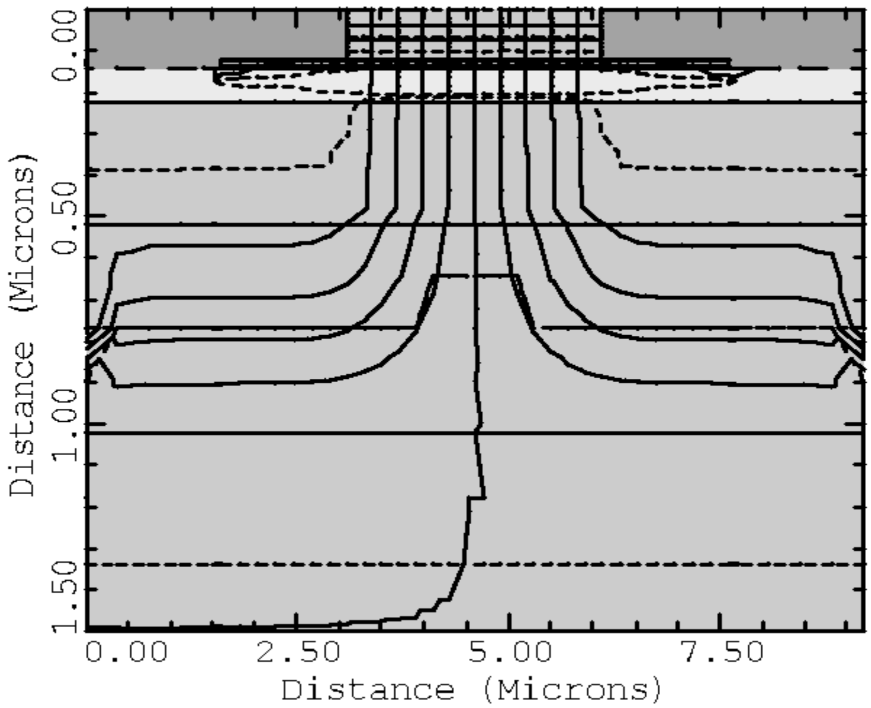


Fig. 9. Current flow at Vce=Vbe=1V

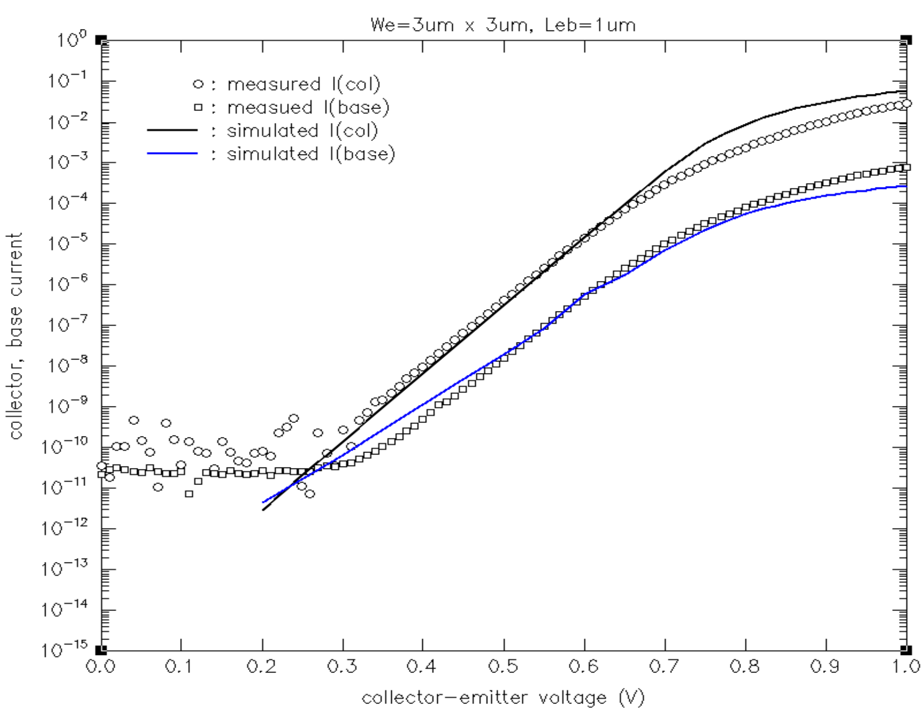


Fig. 10 Measured and simulated collector and base current

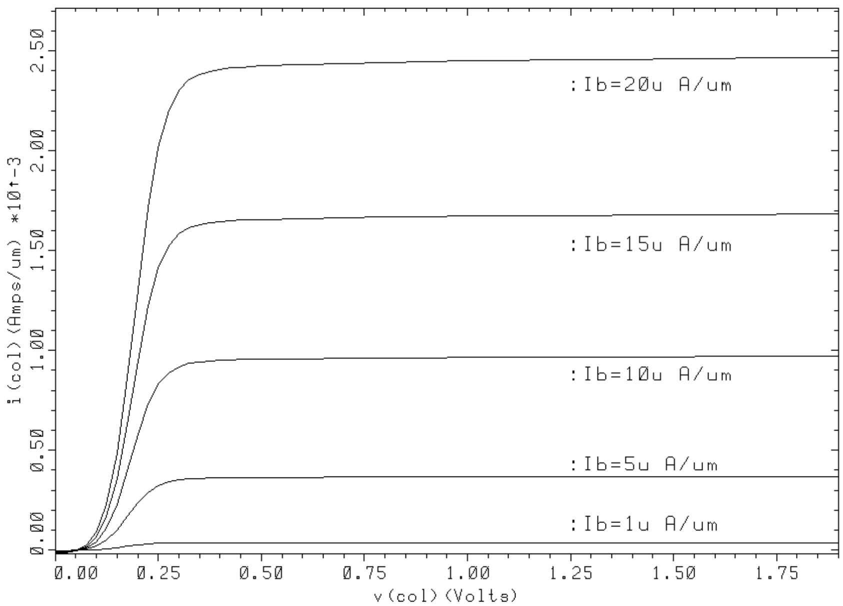


Fig. 11 Ice-Vce curves for variouus Ib with calibrated parameters from Gummel curve