Unit 2 – Bipolar Junction Transistor

Class 3

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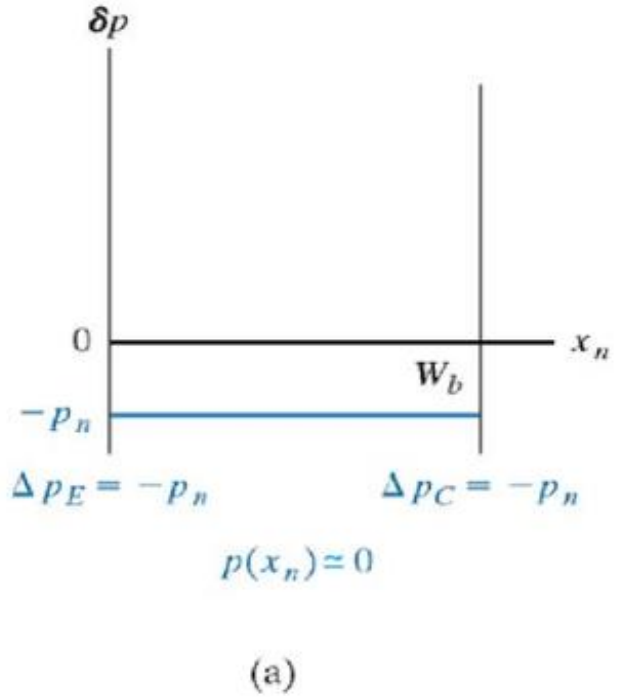
Switching operation of a transistor

Cutoff



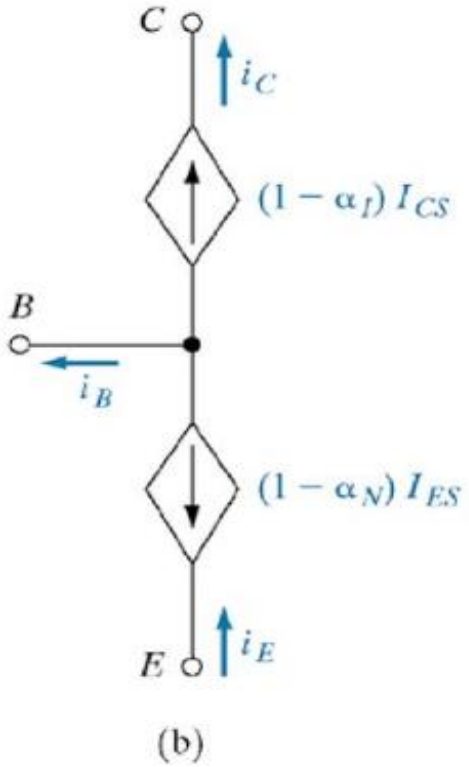


Figure
The cutoff regime of a p-n-p transistor: (a) excess hole distribution in the base region with emitter and collector junctions reverse biased; (b) equivalent circuit

Switching operation of a transistor

Saturation

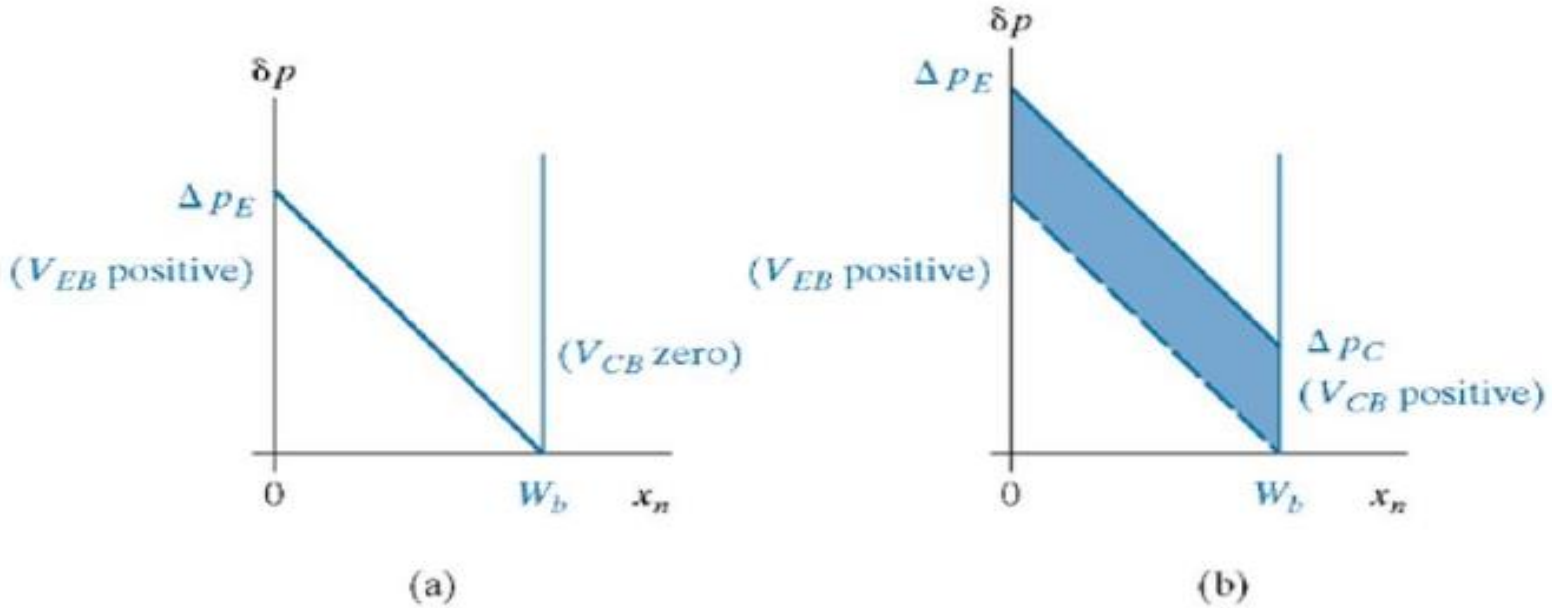
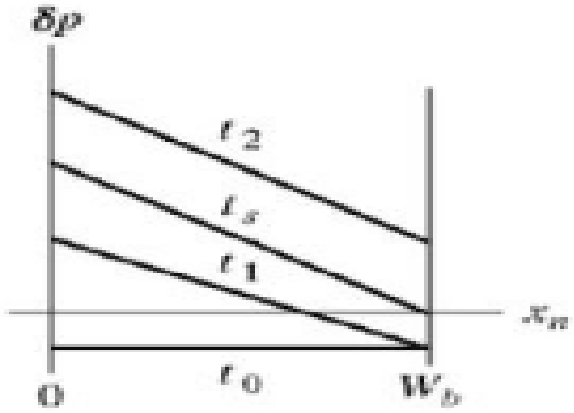


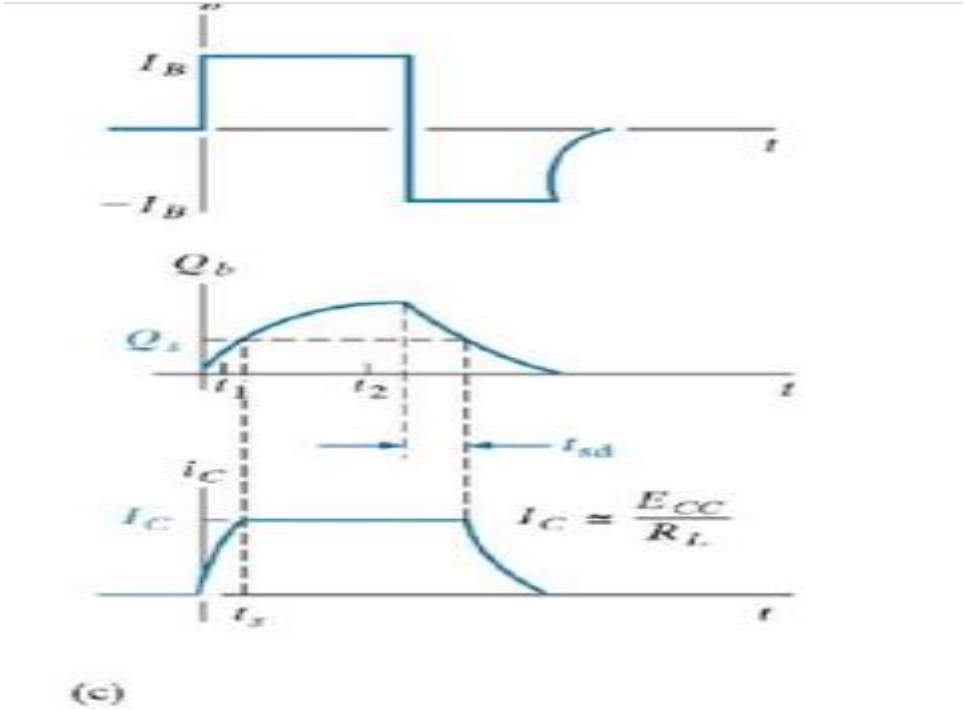
Figure
Excess hole distribution in the base of a saturated transistor: (a) the beginning of saturation; (b) oversaturation.

Switching operation of a transistor



t_0 — Cutoff
t_1 — Normal active region
t_s — Beginning of saturation
t_2 — Final saturated state

The Switching Cycle



(c)

Thank You

HAVE A NICE DAY