

Assignment 2 - Solution key

Part 1

1. (c), 2. (a), 3. (c), 4. (b), 5. (a) and (d)

Part 2

1. Direct writing and small (submicron) feature size
2. Emitter push effect
3. Forms SiO₂; Etches oxide; Acts as a buffer
4. Isotropic

Part 3

1. (a) $6.77 \times 10^{15}/\text{cm}^2$, (b) $4.92 \mu\text{m}$, (c) $4.5 \times 10^{19}/\text{cm}^3$
2. (a) $7.5 \times 10^{15}/\text{cm}^2$, (b) $6.267 \times 10^{20}/\text{cm}^3$, (c) $1.37 \times 10^{18}/\text{cm}^3$