



EL 653 – EL 6003

Diseño CMOS

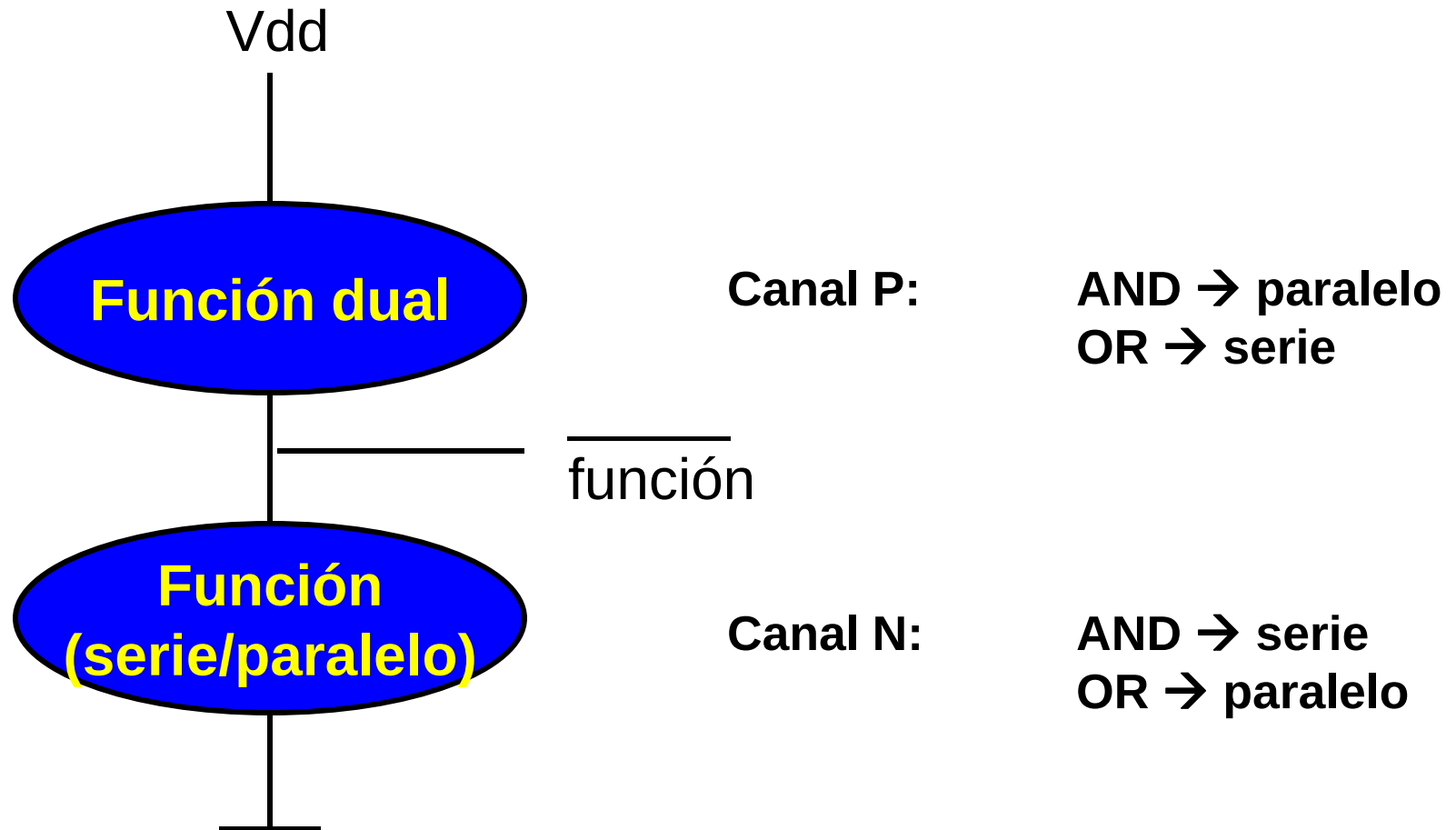


Metodologia General

- CMOS produce funciones invertidas
- Metodo
 - Invierta la función en caso que sea necesario
 - Diseñe la función NMOS (pull down) (AND/OR → serie/paralelo)
 - Diseñe el circuito dual PMOS (pull up) (AND/OR → paralelo/serie)



Metodologia General





Ejemplo 1

$$f = \overline{a \bullet b + c}$$

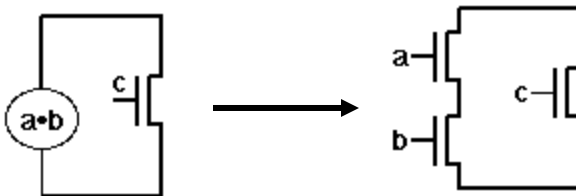
N – channel (pull down)

Formato: (ANDs, Ors)

$$f = \overline{a \bullet b + c}$$

(a AND b) OR C

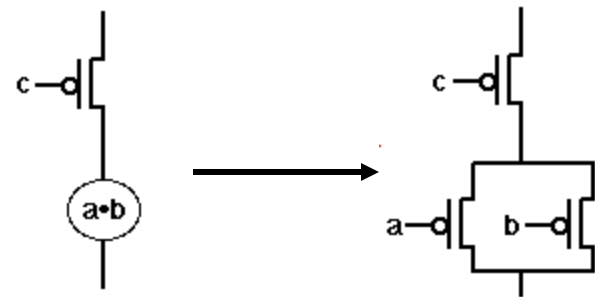
(a serie b) paralelo C



P – channel (pull up)

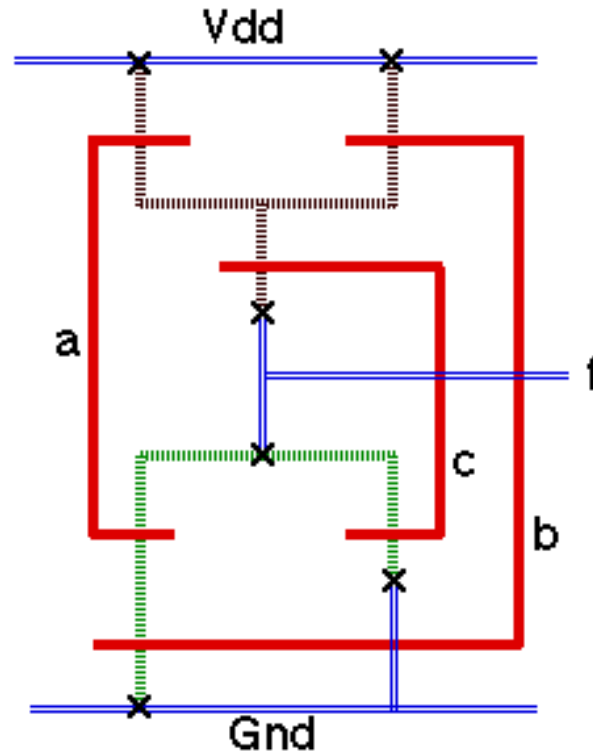
Formato dual: (a AND b) OR C

(a paralelo b) serie C



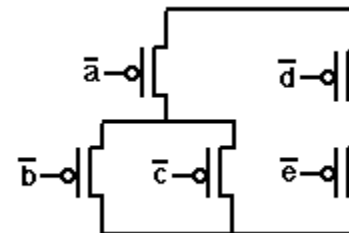
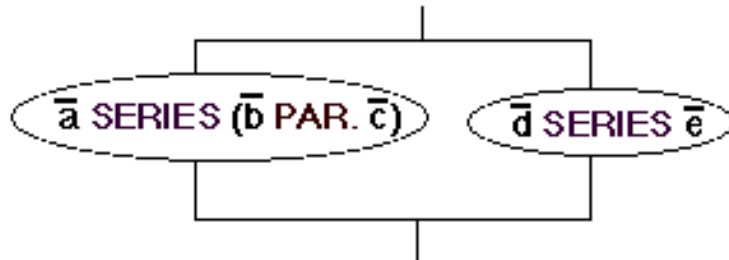
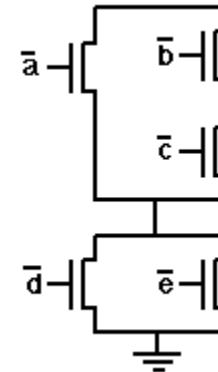
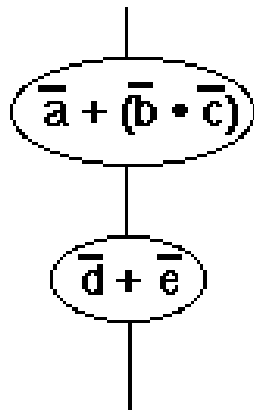


Ejemplo 1 - Layout





$$f = [a (b + c)] + (d \bullet e)$$





$$f = [a (b + c)] + (d \bullet e)$$

