

Lógica Combinacional Modular

(Parte II)

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Sistemas Digitales

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Sumador Completo

X	Y	CIN	S	COUT
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

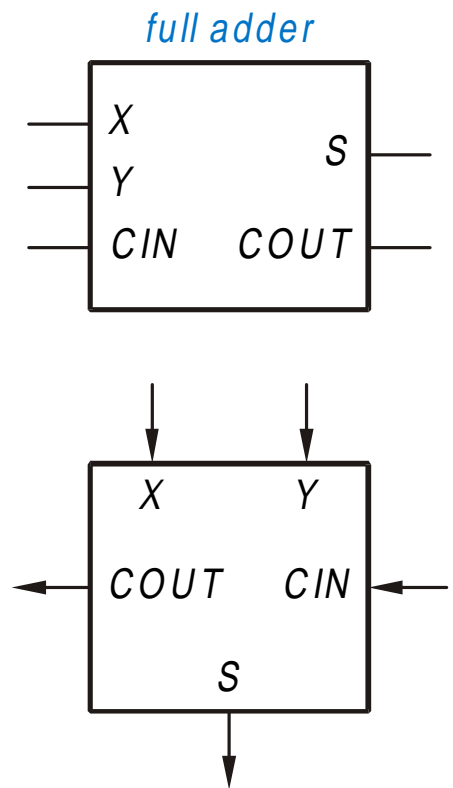
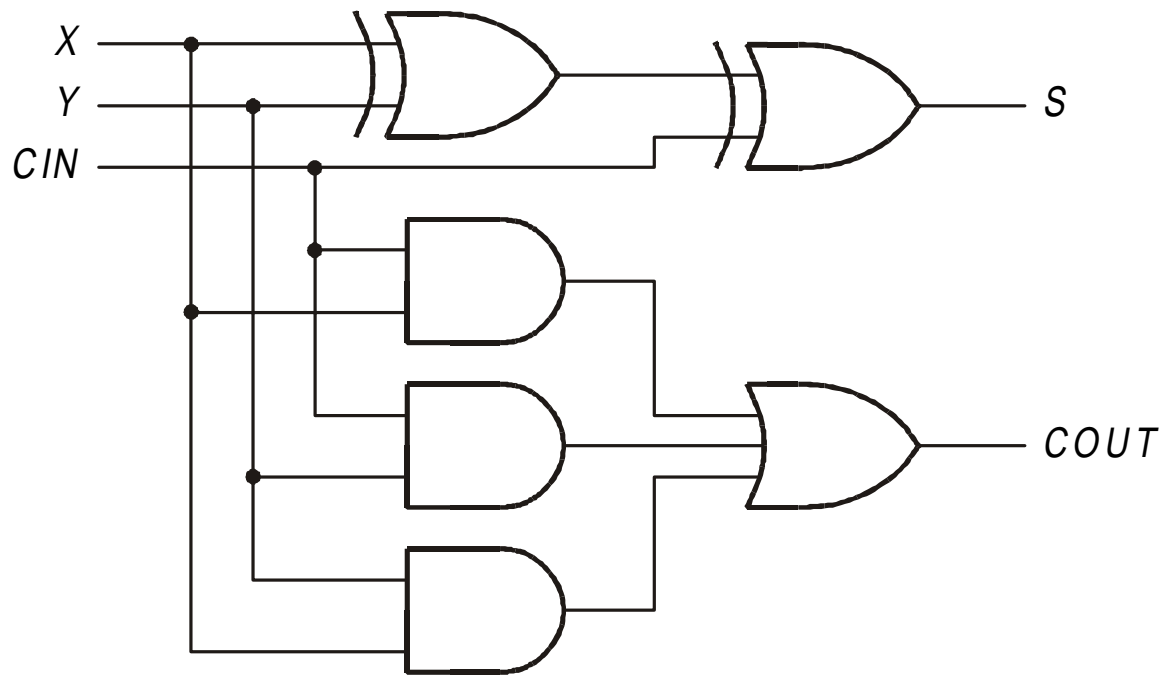
$$S = \bar{X} \cdot \bar{Y} \cdot CIN + X \cdot \bar{Y} \cdot CIN + X \cdot \bar{Y} \cdot \overline{CIN} + X \cdot Y \cdot CIN$$

$$S = X \oplus Y \oplus CIN$$

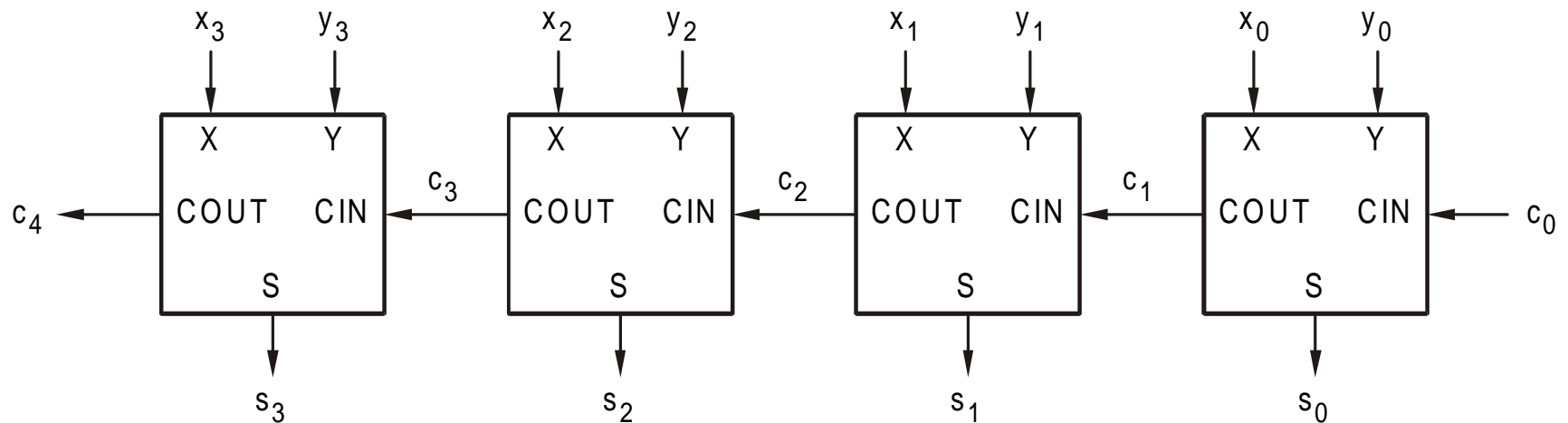
$$COUT = \bar{X} \cdot Y \cdot CIN + X \cdot \bar{Y} \cdot CIN + X \cdot Y \cdot \overline{CIN} + X \cdot Y \cdot CIN$$

$$COUT = X \cdot Y + Y \cdot CIN + X \cdot CIN$$

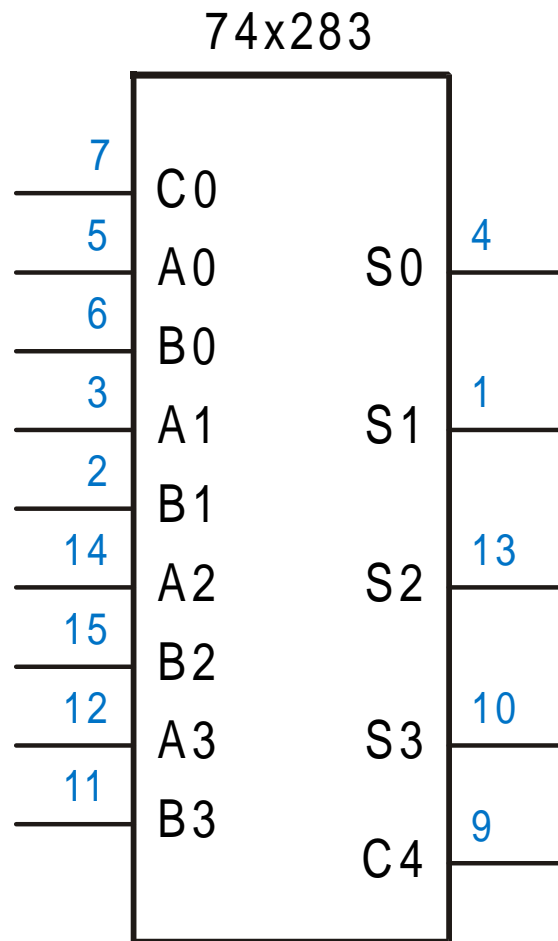
Sumador Completo



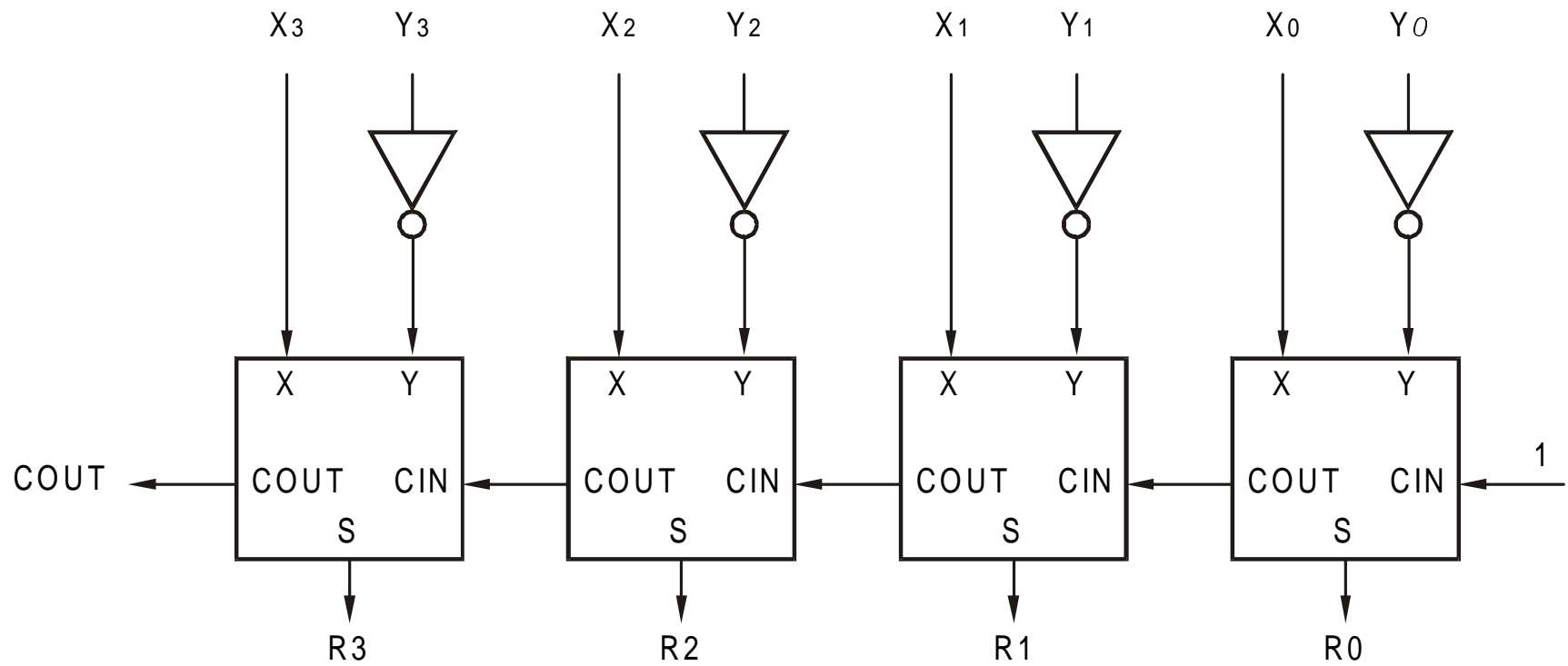
Sumador con propagación de acarreo



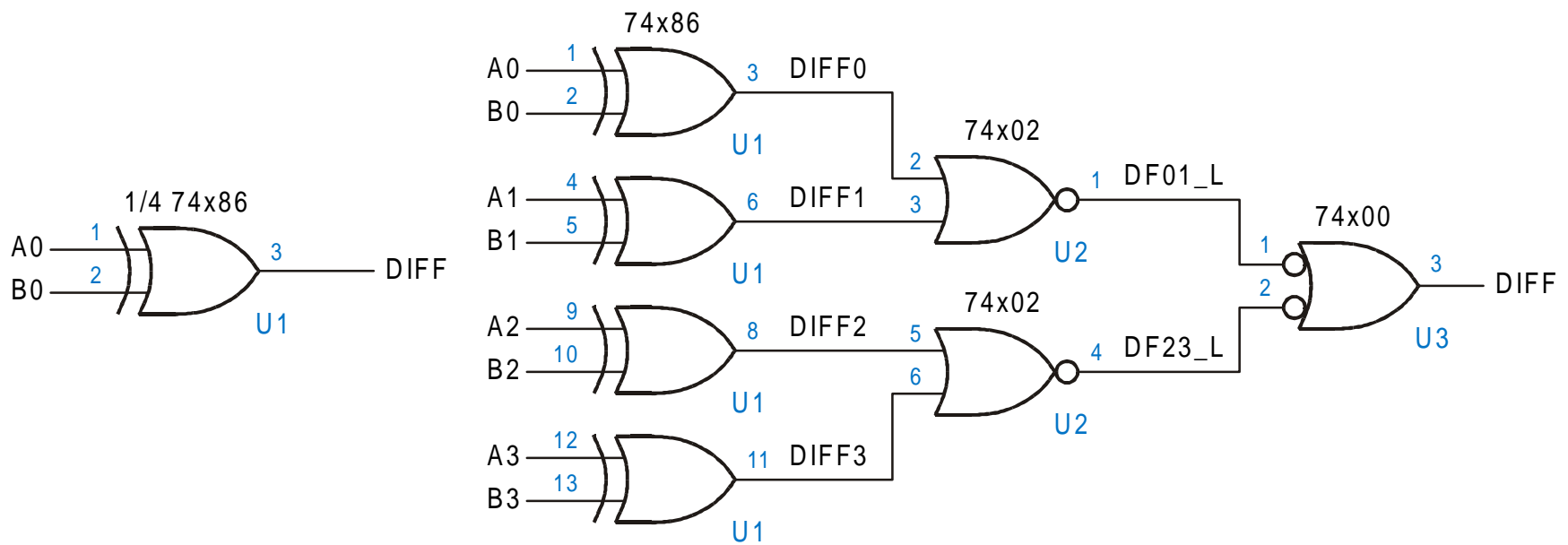
Sumador Comercial



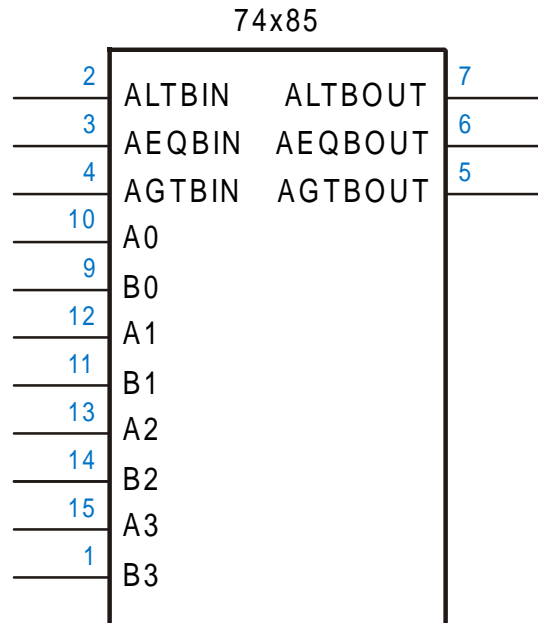
Restador



Comparadores de Magnitud



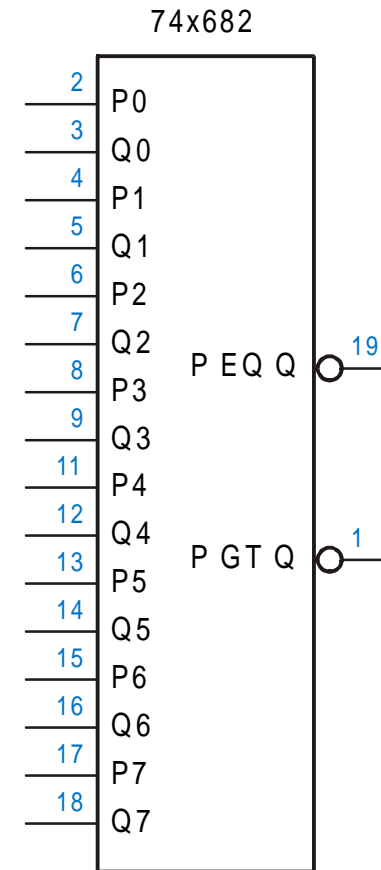
Comparadores Comerciales



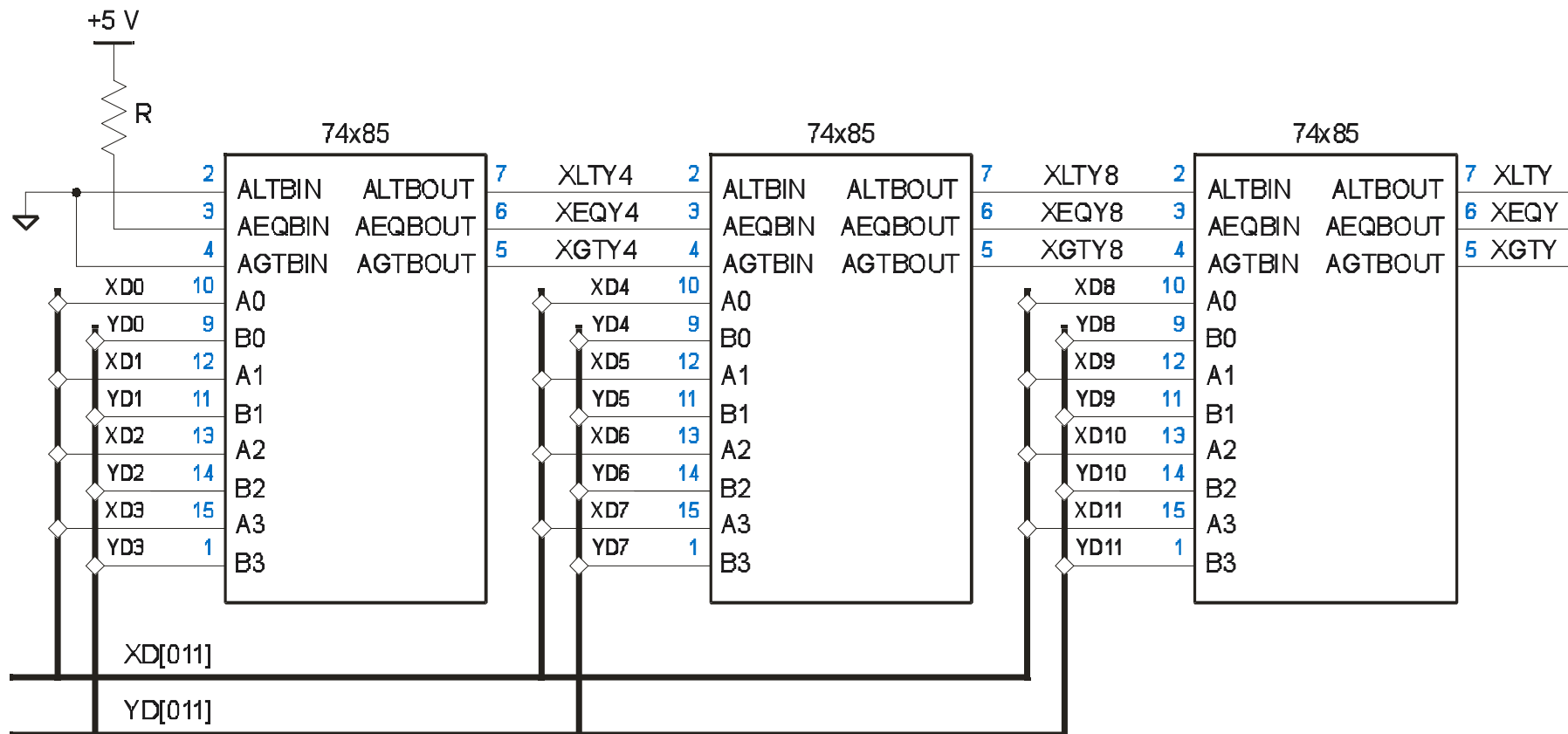
$$\text{AGTBOUT} = (A > B) + (A = B) \cdot \text{AGTBIN}$$

$$\text{AEQBOUT} = (A = B) \cdot \text{AEQBIN}$$

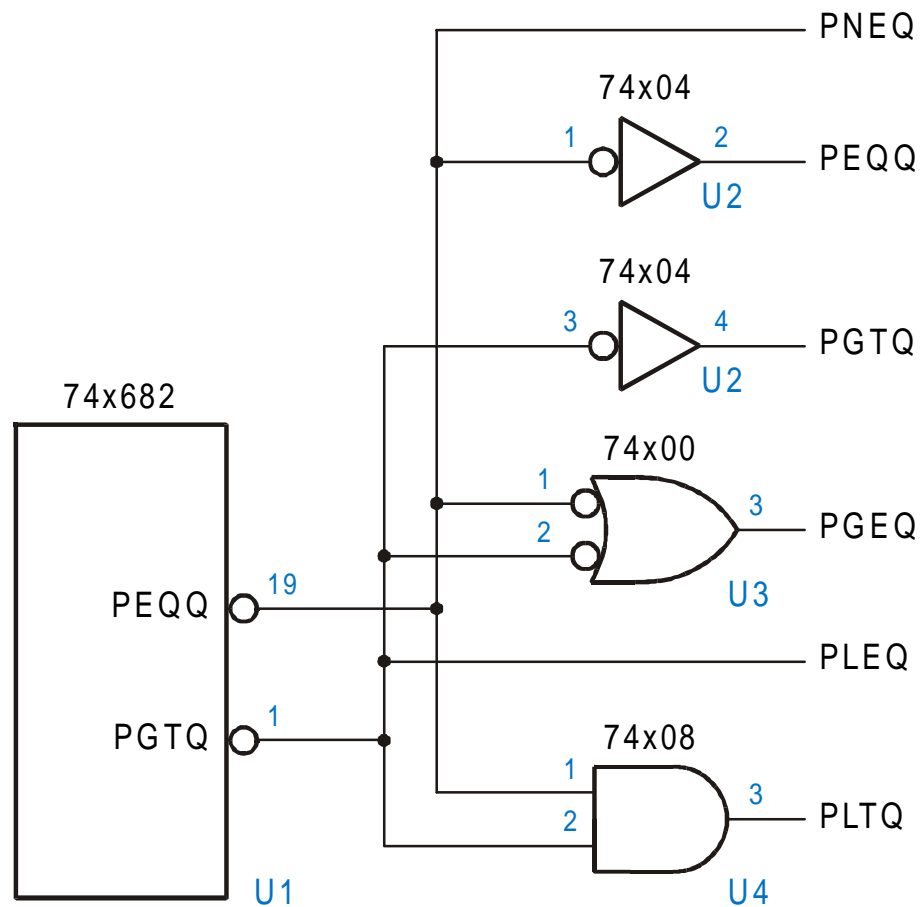
$$\text{ALTBOUT} = (A < B) + (A = B) \cdot \text{ALTBIN}$$



Comparador de 12 bits

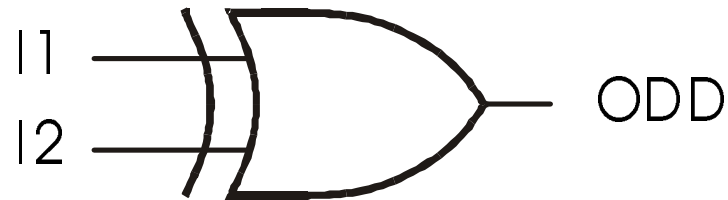


Comparadores

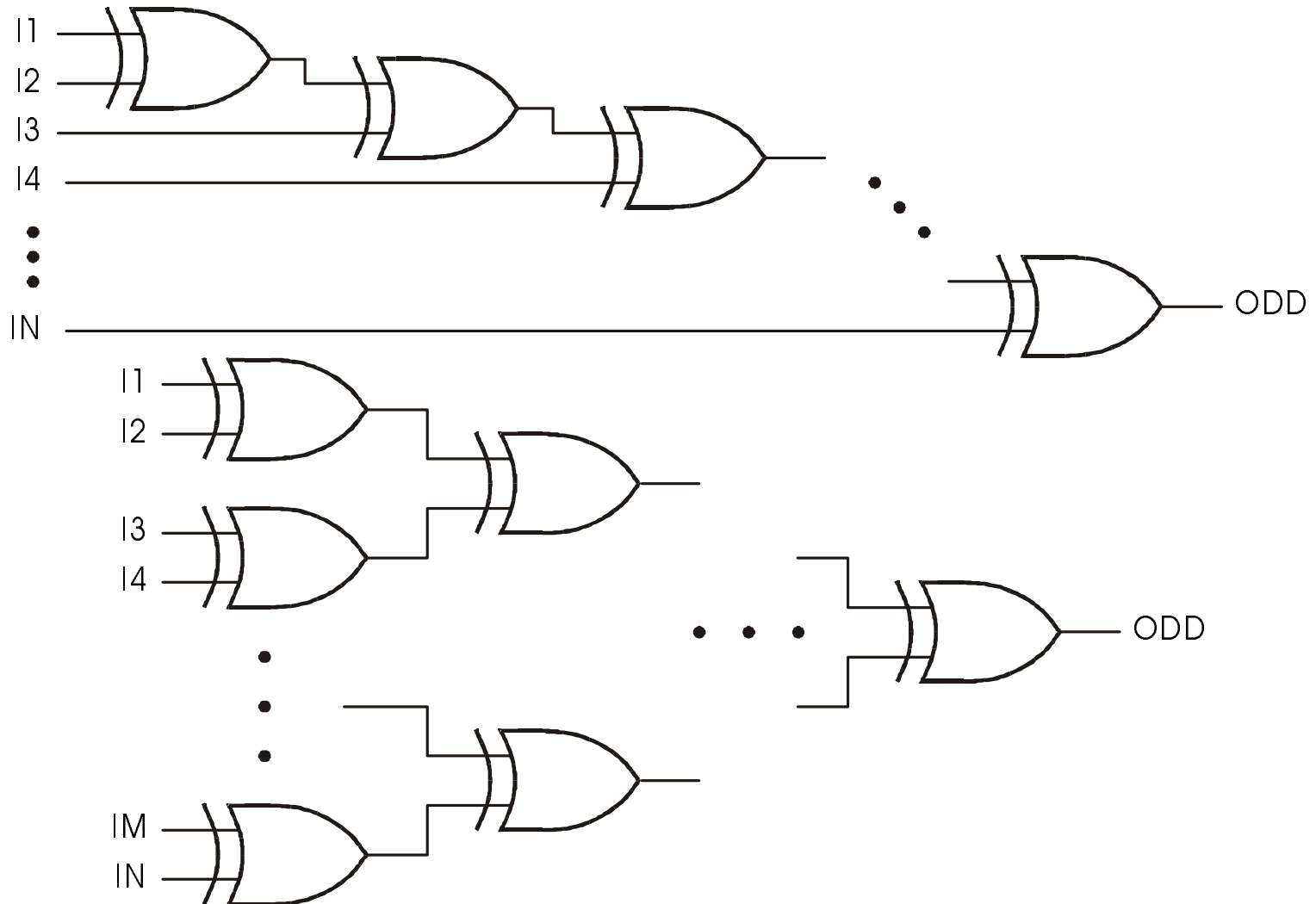


Chequeador/Generador de Paridad

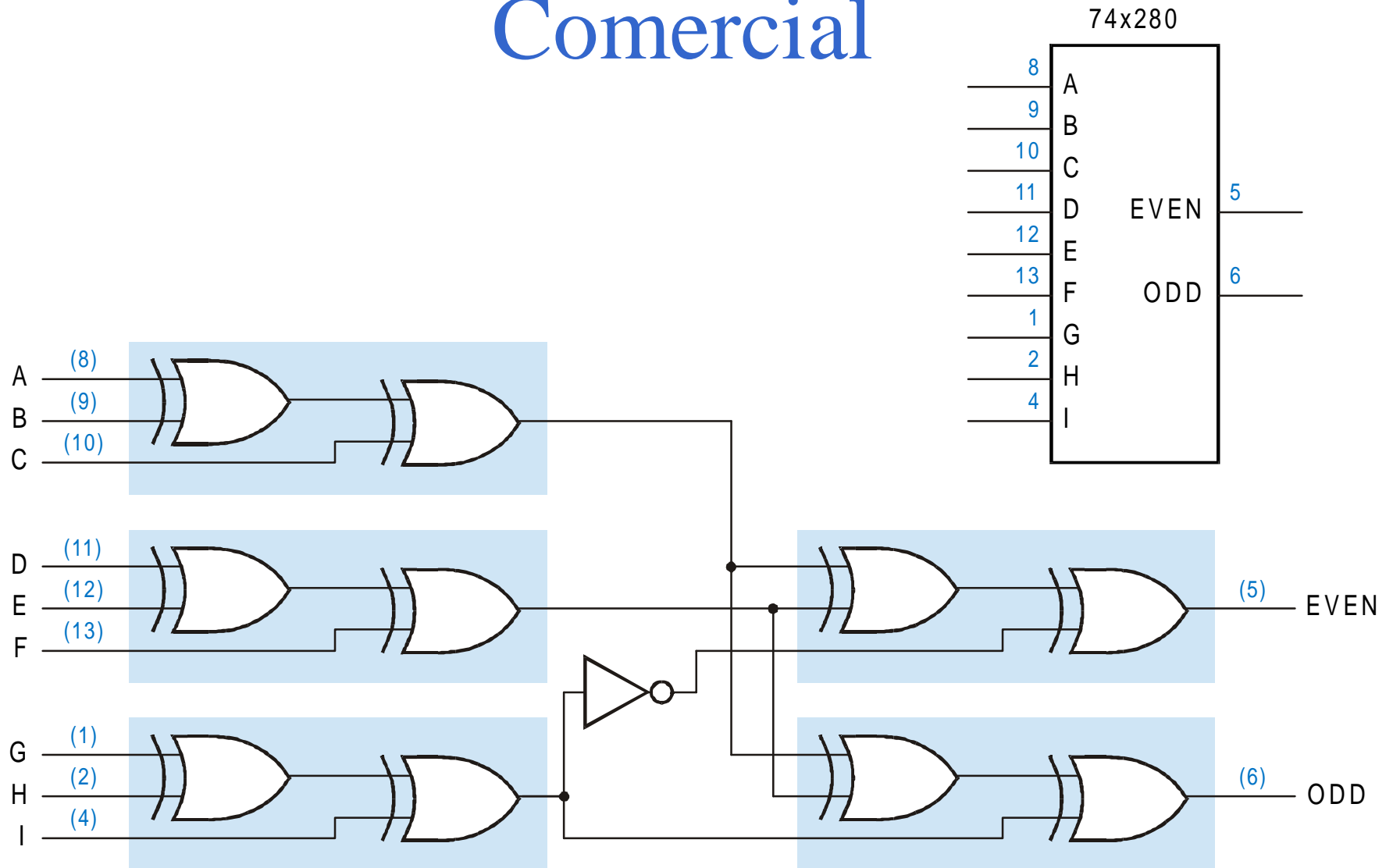
X	Y	$X \oplus Y$
0	0	0
0	1	1
1	0	1
1	1	0



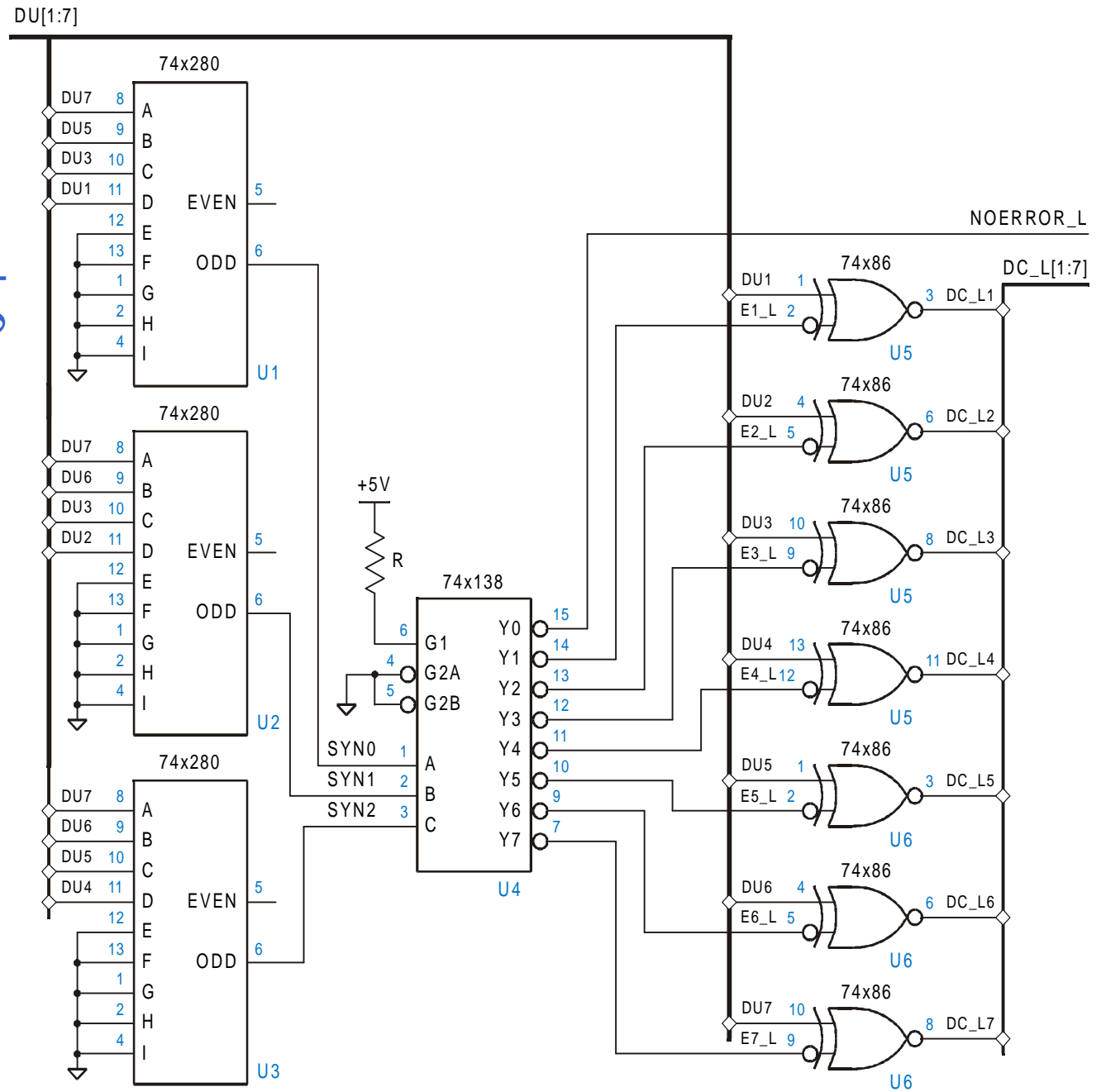
Cascada – En Árbol



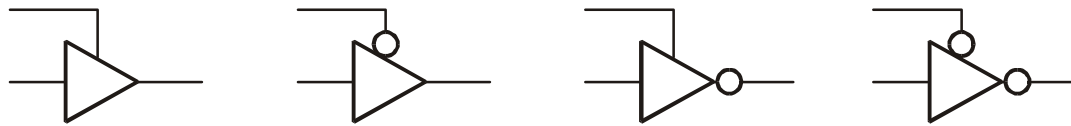
Comercial



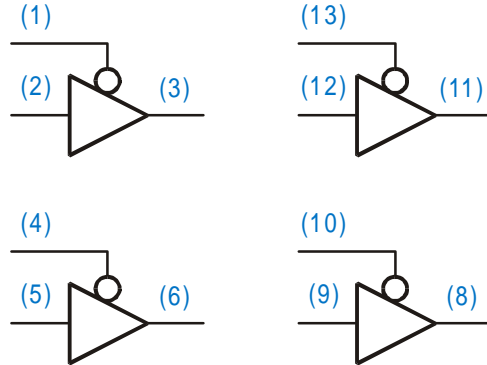
Código Hamming



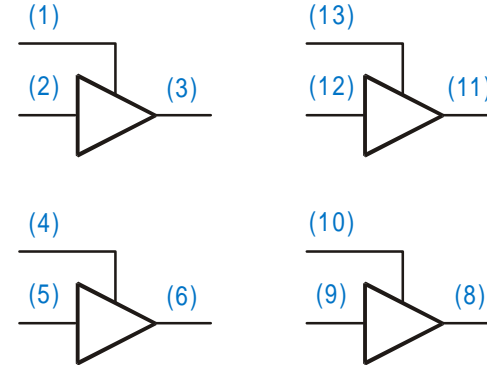
Registros de 3 estados



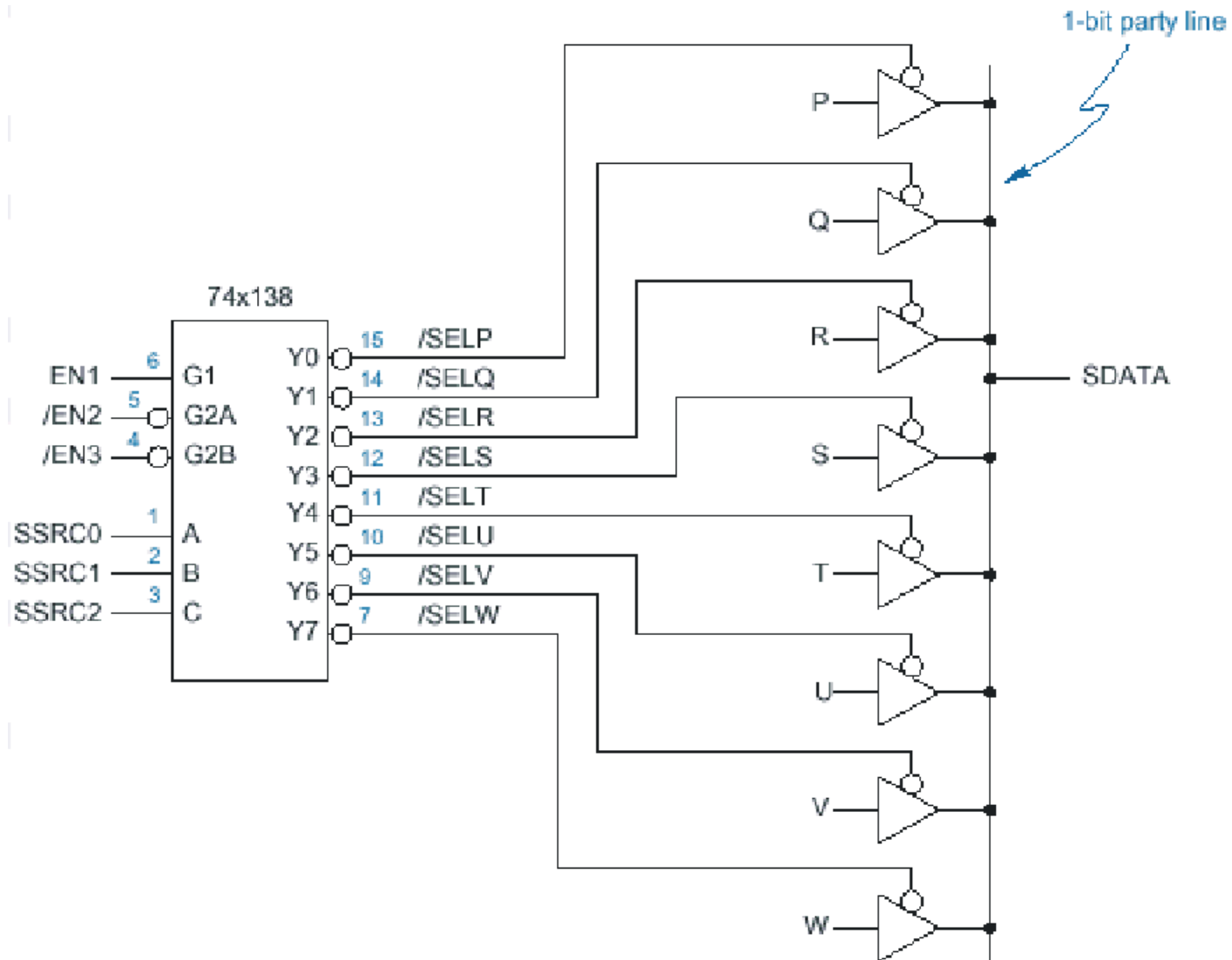
74x125



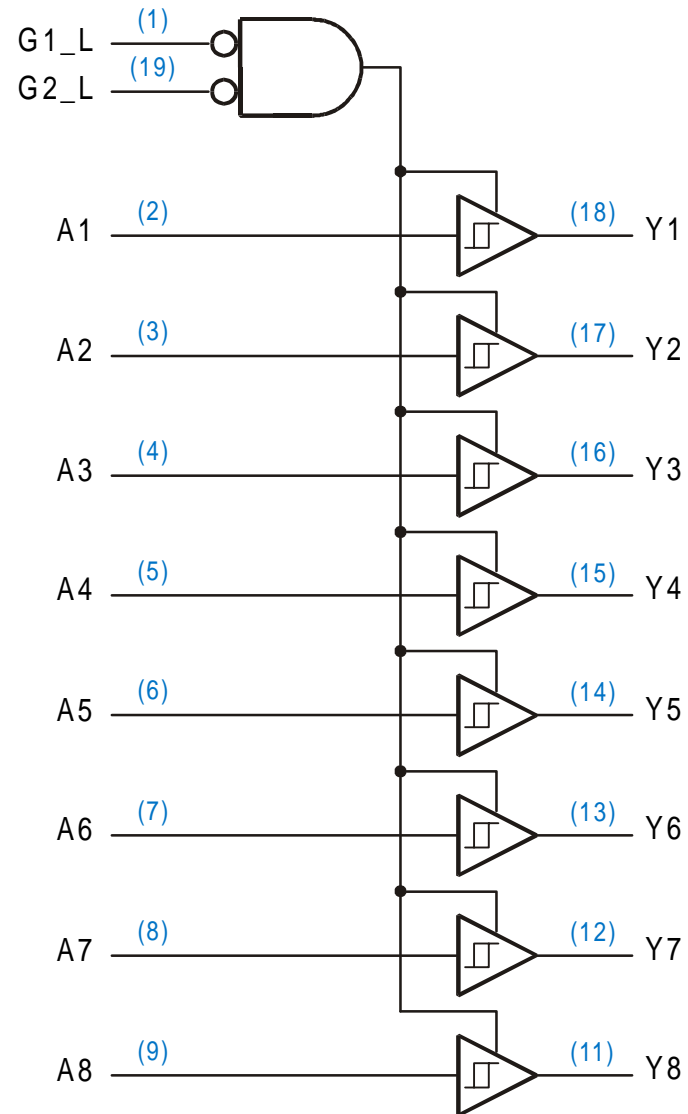
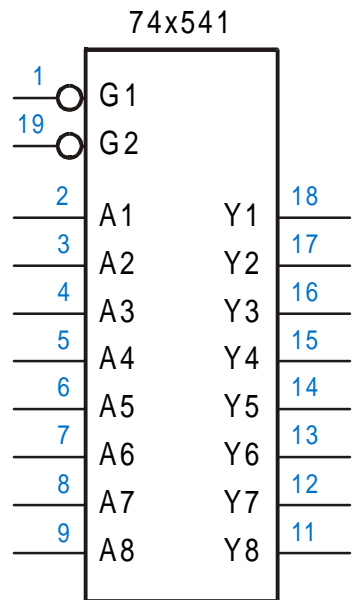
74x126



Compartir 1 línea



Registros de 3 estados comerciales



Registros de 3 estados comerciales

