(05)- Projete um conversor de Complemento de 2 para BCD8421
Requisito: Valores não representáveis em BCD8421 ativam sinal de erro

① - Descrição

Entrada: $C_2 : \{C_4, C_3, C_2, C_1, C_0\}$

Saída: $BCD : \{B_8, B_4, B_2, B_1\}$

E.

Comportamento

$E = 0 \rightarrow$ "00000" até "01001"

$E = 1 \rightarrow$ "01010" até "11111"

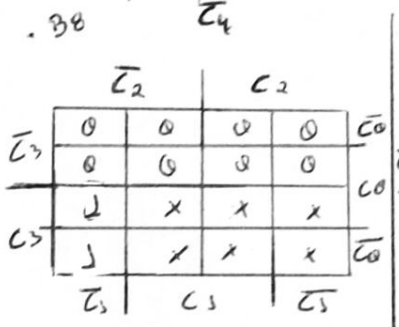
$B_8 = C_3$, $B_4 = C_2$, $B_2 = C_1$, $B_1 = C_0$.

② T.V

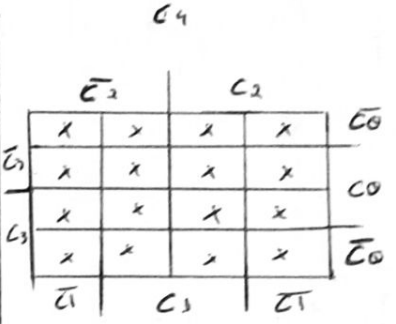
C_4	C_3	C_2	C_1	C_0	B_8	B_4	B_2	B_1	E
0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	1	0
0	0	0	1	0	0	0	1	0	0
0	0	0	1	1	0	0	1	1	0
0	0	1	0	0	0	1	0	0	0
0	0	1	0	1	0	1	0	1	0
0	0	1	1	0	0	1	1	0	0
0	0	1	1	1	0	1	1	1	0
0	1	0	0	0	1	0	0	0	0
0	1	0	0	1	1	0	0	1	0
0	1	0	1	0		x			1
0	1	0	1	1		x			1
0	1	1	0	0		x			1
0	1	1	0	1		x			1
0	1	1	1	0		x			1
0	1	1	1	1		x			1
1	0	0	0	0		x			1
1	0	0	0	1		x			1
1	0	0	1	0		x			1
1	0	0	1	1		x			1
1	0	1	0	0		x			1
1	0	1	0	1		x			1
1	0	1	1	0		x			1
1	0	1	1	1		x			1
1	1	0	0	0		x			1
1	1	0	0	1		x			1
1	1	0	1	0		x			1
1	1	0	1	1		x			1
1	1	1	0	0		x			1
1	1	1	0	1		x			1
1	1	1	1	0		x			1
1	1	1	1	1		x			1

③ Simplificação

- B_8

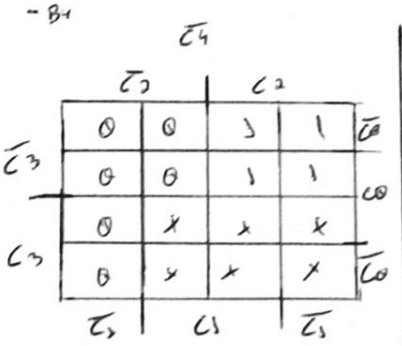


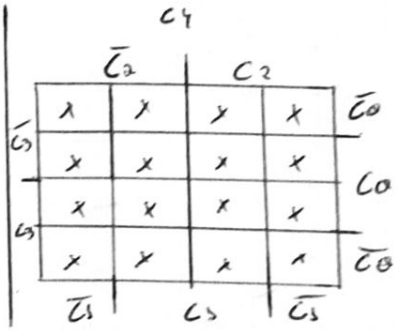
Grupo 1 = C_3



$B_8 = C_3$//

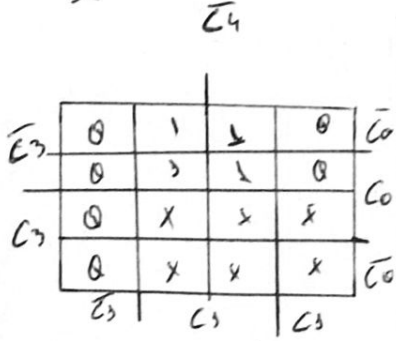
- B_4

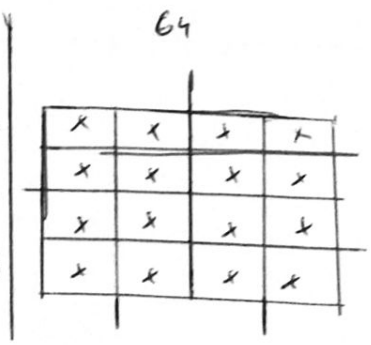




$B_4 = C_2$//

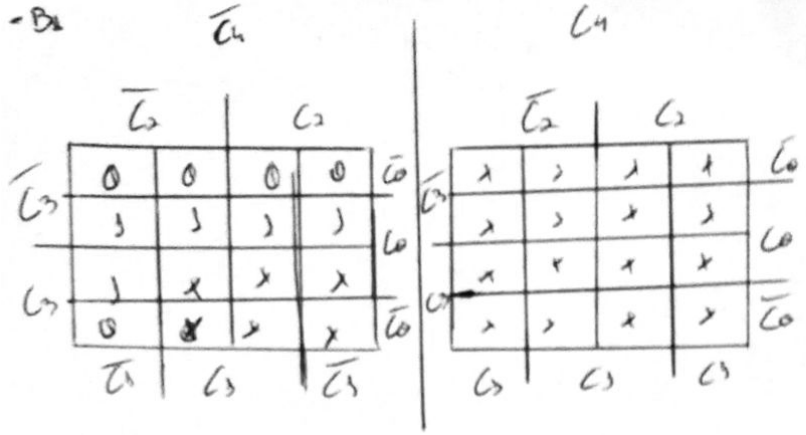
- B_2





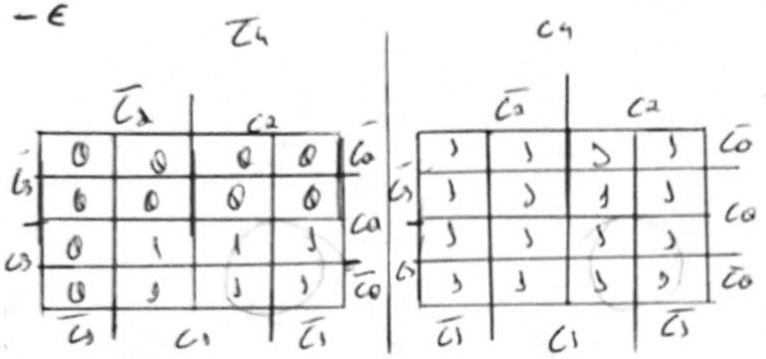
$B_2 = C_3$//

- B_3



$B_3 = C_0$

- e



Grupo 1 = C_4

Grupo 2 = $(C_3 . C_2)$

Grupo 3 = $(C_3 . C_1)$

$e = C_4 + (C_3 . C_2) + (C_3 . C_1)$

④ Circuito