

## 第二章课后作业-1

2154312 郑博远

P62

3.

$$F_1 = \overline{A\bar{B}C + AB\bar{C} + \bar{A}BC + \bar{B}\bar{C}} = \bar{A}\bar{B}C + \bar{A}B\bar{C} + ABC$$

$$F_2 = \overline{\bar{A}\bar{B} + \bar{A}\bar{C} + \bar{B}\bar{C}} = AB + BC + AC$$

A	B	C	$F_1$	$F_2$
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	0	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

∴  $F_1$  的功能为

$B \neq C$  时,  $F_1 = \bar{A}$

$B = C = 0$  时,  $F_1 = A$

$B = C = 1$  时,  $F_1 = 0$

$F_2$  的功能为:

A、B、C 有两个及以上为 1 时,

$F_2$  输出为 1; 否则  $F_2 = 0$

6.

A	B	C	D	W	X	Y	Z
0	0	1	1	0	0	0	0
0	1	0	0	0	0	0	1
0	1	0	1	0	0	1	0
0	1	1	0	0	0	1	1
0	1	1	1	0	1	0	0
1	0	0	0	0	1	0	1
1	0	0	1	0	1	1	0
1	0	1	0	0	1	1	1
1	0	1	1	1	0	0	0
1	1	0	0	1	0	0	1

在输入的约束条件下有:

$$W = ACD + AB$$

$$X = BCD + \bar{B}\bar{C} + \bar{B}\bar{D}$$

$$Y = \bar{C}D + C\bar{D}$$

$$Z = \bar{D}$$

功能: 将输入的余三码

转为 8421 码输出