



# 南京理工大学

NANJING UNIVERSITY OF SCIENCE & TECHNOLOGY

$$f = \bar{a}\bar{b}\bar{c}\bar{d} + abcd$$

(a) Karnaugh maps for  $f$

卡诺图

| $\backslash ab$ | 00  | 01 | 11  | 10 |
|-----------------|-----|----|-----|----|
| 00              | (t) |    |     |    |
| 01              |     |    |     |    |
| 11              |     |    | (t) |    |
| 10              |     |    |     |    |

| $\backslash ab$ | 00 | 01 | 11 | 10 |
|-----------------|----|----|----|----|
| 00              |    | t  | t  | t  |
| 01              | t  | t  | t  | t  |
| 11              | t  | t  |    | t  |
| 10              | t  | t  | t  | t  |

(b) Prime implicant of  $f$

$\bar{f}$

圈层大  
数少

$\bar{a}\bar{b}\bar{c}\bar{d}$      $abcd$

$b\bar{c}$      $\bar{a}d$      $a\bar{b}$      $c\bar{d}$

(c)

|                                | $a$ | $b$ | $c$ | $d$ |
|--------------------------------|-----|-----|-----|-----|
| $\bar{a}\bar{b}\bar{c}\bar{d}$ | F   | F   | F   | F   |
| $abcd$                         | T   | T   | T   | T   |
| $b\bar{c}$                     |     | T   | F   |     |
| $\bar{a}d$                     | F   |     |     | T   |
| $a\bar{b}$                     | T   | F   |     |     |
| $c\bar{d}$                     |     |     | T   | F   |

蕴含集 {

IC 测试集为空

(d)  $f$  的 VTPC Test set  $\bar{a}\bar{b}\bar{c}\bar{d}$  {FFFF}

南京孝陵卫 200 号

200 Xiao Ling Wei Nanjing

邮编 post code 210094

电话 (025) 84315114