

Trabalho 3ª Unidade

Aluno: Paulo Henrique Lopes Carlos

| Binário | A | B | C | D | E | F | G | Número |
|----------------|----------|----------|----------|----------|----------|----------|----------|---------------|
| 0000 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 0001 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0010 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 2 |
| 0011 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 3 |
| 0100 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 4 |
| 0101 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 5 |
| 0110 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 6 |
| 0111 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| 1000 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| 1001 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 9 |

Karnaugh A

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 0 | 1 | 1 |
| <i>01</i> | 0 | 1 | 1 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$A = \bar{a}.c + a.\bar{b}.\bar{c} + \bar{a}.b.d + \bar{b}.\bar{c}.\bar{d}$$

Karnaugh B

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 1 | 1 | 1 |
| <i>01</i> | 1 | 0 | 1 | 0 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$B = \bar{a}.\bar{b} + \bar{a}.c.d + \bar{a}.\bar{c}.\bar{d} + \bar{b}.\bar{c}$$

Karnaugh C

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 1 | 1 | 0 |
| <i>01</i> | 1 | 1 | 1 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$C = \bar{a}.\bar{c} + \bar{a}.d + \bar{b}.\bar{c} + \bar{a}.b$$

Karnaugh D

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 0 | 1 | 1 |
| <i>01</i> | 0 | 1 | 0 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$D = \bar{a}.\bar{b}.c + \bar{a}.c.\bar{d} + a.\bar{b}.\bar{c} + \bar{b}.\bar{c}.\bar{d} + \bar{a}.b.\bar{c}.d$$

Karnaugh E

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 0 | 0 | 1 |
| <i>01</i> | 0 | 0 | 0 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 0 | 0 | 0 |

$$E = \bar{a}.c.\bar{d} + \bar{b}.\bar{c}.\bar{d}$$

Karnaugh F

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 1 | 0 | 0 | 0 |
| <i>01</i> | 1 | 1 | 0 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$F = \bar{a}.\bar{c}.\bar{d} + \bar{a}.b.\bar{c} + a.\bar{b}.\bar{c} + \bar{a}.b.\bar{d}$$

Karnaugh G

| <i>AB/CD</i> | <i>00</i> | <i>01</i> | <i>11</i> | <i>10</i> |
|--------------|-----------|-----------|-----------|-----------|
| <i>00</i> | 0 | 0 | 1 | 1 |
| <i>01</i> | 1 | 1 | 0 | 1 |
| <i>11</i> | 0 | 0 | 0 | 0 |
| <i>10</i> | 1 | 1 | 0 | 0 |

$$G = \bar{a}.\bar{b}.c + \bar{a}.c.\bar{d} + \bar{a}.b.\bar{c} + a.\bar{b}.\bar{c}$$

Circuito Final

