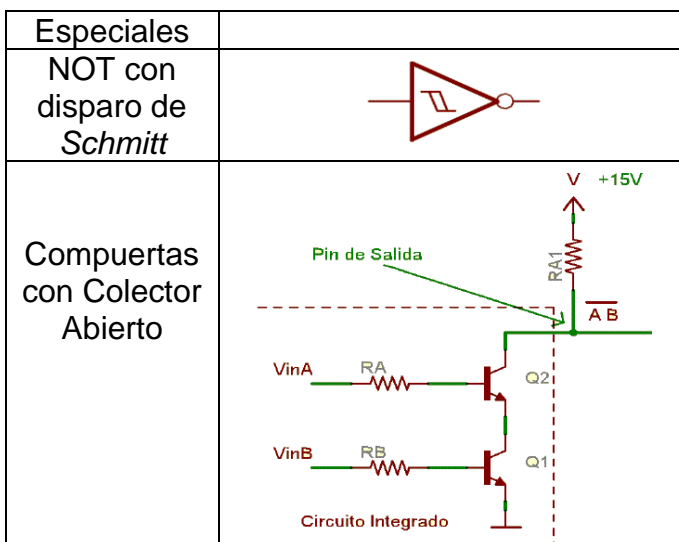


Nombre	Símbolo Gráfico	Función	Tabla de Verdad										
AND		$F = A \cdot B$ $F = A \cap B$ $F = AB$	<table border="1"> <thead> <tr><th>AB</th><th>F</th></tr> </thead> <tbody> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>0</td></tr> <tr><td>10</td><td>0</td></tr> <tr><td>11</td><td>1</td></tr> </tbody> </table>	AB	F	00	0	01	0	10	0	11	1
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11	1												
OR		$F = A + B$ $F = A \cup B$	<table border="1"> <thead> <tr><th>AB</th><th>F</th></tr> </thead> <tbody> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>1</td></tr> </tbody> </table>	AB	F	00	0	01	1	10	1	11	1
AB	F												
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NOT		$F = \bar{A}$	<table border="1"> <thead> <tr><th>A</th><th>F</th></tr> </thead> <tbody> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td></tr> </tbody> </table>	A	F	0	1	1	0				
A	F												
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BUFFER		$F = A$	<table border="1"> <thead> <tr><th>A</th><th>F</th></tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> </tbody> </table>	A	F	0	0	1	1				
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NAND		$F = \overline{A \cdot B}$ $F = \overline{A} + \overline{B}$	<table border="1"> <thead> <tr><th>AB</th><th>F</th></tr> </thead> <tbody> <tr><td>00</td><td>1</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>0</td></tr> </tbody> </table>	AB	F	00	1	01	1	10	1	11	0
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XOR		$F = \bar{A}B + A\bar{B}$ $F = A \oplus B$	<table border="1"> <thead> <tr><th>AB</th><th>F</th></tr> </thead> <tbody> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>0</td></tr> </tbody> </table>	AB	F	00	0	01	1	10	1	11	0
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Especiales											
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Tres estados habilitada con "bajo"	<table border="1"> <thead> <tr><th>AH</th><th>F</th></tr> </thead> <tbody> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>HZ</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>HZ</td></tr> </tbody> </table>	AH	F	00	0	01	HZ	10	1	11	HZ
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Álgebra de Boole

Postulados:

- | | | |
|--------------------------|---|---|
| 1. $x = 0$ Si $x \neq 1$ | ; | $x = 1$ Si $x \neq 0$ |
| 2. $x + 0 = x$ | ; | $x \cdot 1 = x$ |
| 3. $x + y = y + x$ | ; | $xy = yx$ (conmutatividad) |
| 4. $x(y + z) = xy + xz$ | ; | $x + yz = (x + y)(x + z)$ (distributividad) |
| 5. $x + \bar{x} = 1$ | ; | $x \cdot \bar{x} = 0$ |

Teoremas:

- | | | |
|---|---|--|
| 1. $x + x = x$ | ; | $x \cdot x = x$ |
| 2. $x + 1 = 1$ | ; | $x \cdot 0 = 0$ |
| 3. $\overline{(\bar{x})} = x$ | | |
| 4. $x + (y + z) = (x + y) + z$ | ; | $x(yz) = (xy)z$ (asociatividad) |
| 5. $\overline{(x + y)} = \bar{x} \cdot \bar{y}$ | ; | $\overline{(xy)} = \bar{x} + \bar{y}$ (D'Morgan) |
| 6. $x + xy = x$ | ; | $x(x + y) = x$ (Absorción) |
| 7. $x(\bar{x} + y) = xy$ | ; | $x + \bar{x}y = x + y$ |

Teorema de Dualidad:

“Cada expresión algebraica deducida de los postulados del álgebra de Boole permanece válida si los operadores y los elementos identidad se intercambian”

M.I. Ricardo Mota Marzano