



Specifications

Family	Operating Temperature Range	Power Supply range
FZH 101...FZH 171	0 °C ... + 70 °C	13.5 V ... 17.0 V
FZH 105...FZH 175	-25 °C ... + 85 °C	13.5 V ... 17.0 V

Basic Characteristics per NAND Gate @ $V_{CC} = 15 V$, $T_A = 25 °C$

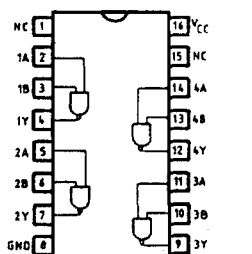
Parameter	Value	Unit
V_{IH} min	7.5	V
V_{IL} max	4.5	V
I_{IH} max	1.0	uA
I_{IL} max	1.8	mA
V_{OL} max	1.7	V
V_{OH} min	12.0	V
I_{OL} max	18	mA
I_{OH} max	0.1	mA
I_{OS} min	15	mA
I_{OS} max	60	mA
I_{CC} typ @ V_{OL}	3.0	mA
I_{CC} typ @ V_{OH}	1.0	mA
P_d medium	30	mW
t_{pLH} typ (Note 1)	175	ns
t_{pHL} typ (Note 1)	175	ns

Note 1: The propagation delay time and the noise immunity can be increased by connecting an external capacitor between "N" pin and the output "Y" of the same gate.

QUAD 2-INPUT NAND GATES

Function : $Y = \overline{A \cdot B}$

FZH 101
FZH 105

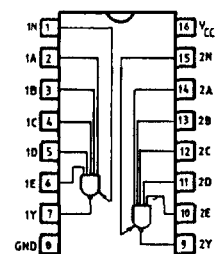


PACKAGE MP-117

DUAL 5-INPUT NAND GATES WITH NOISE-FILTER INPUT

Function : $Y = \overline{A \cdot B \cdot C \cdot D \cdot E}$

FZH 131
FZH 135

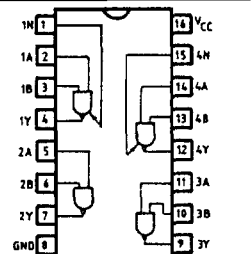


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QUAD 2-INPUT NAND GATES WITH NOISE-FILTER INPUT

Function : $Y = \overline{A \cdot B}$

FZH 111
FZH 115

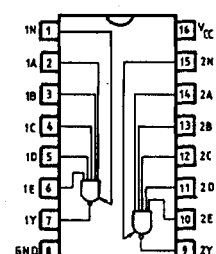


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DUAL 5-INPUT NAND BUFFERS (I_{OL} max=54mA) WITH N.F. INPUT

Function : $Y = \overline{A \cdot B \cdot C \cdot D \cdot E}$

FZH 141
FZH 145

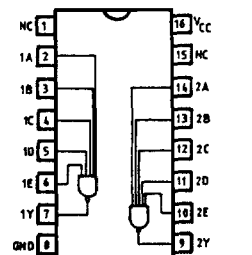


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DUAL 5-INPUT NAND GATES

Function : $Y = \overline{A \cdot B \cdot C \cdot D \cdot E}$

FZH 121
FZH 125

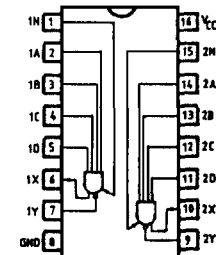


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DUAL EXPANDABLE 4-INPUT NAND GATES WITH N.F. INPUT

Function : $Y = \overline{A \cdot B \cdot C \cdot D \cdot X}$

FZH 171
FZH 175



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To build extended inputs, connect external diodes with the anode to the X input.