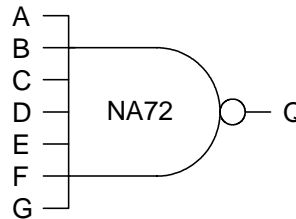


NA72 is a 7-input NAND gate with 2x drive strength.

Truth Table

| A | B | C | D | E | F | G | Q |
|---|---|---|---|---|---|---|---|
| L | X | X | X | X | X | X | H |
| X | L | X | X | X | X | X | H |
| X | X | L | X | X | X | X | H |
| X | X | X | L | X | X | X | H |
| X | X | X | X | L | X | X | H |
| X | X | X | X | X | L | X | H |
| X | X | X | X | X | X | L | H |
| X | X | X | X | X | X | X | L |
| H | H | H | H | H | H | H | L |



Capacitance

| | Ci (pF) |
|---|---------|
| A | 0.034 |
| B | 0.023 |
| C | 0.031 |
| D | 0.036 |
| E | 0.025 |
| F | 0.027 |
| G | 0.031 |

Area

1.22 mils²

Power

4.23 μW/MHz

Delay [ns] = tpd.. = f(SL, L)

with SL = Input Slope [ns] ; L = Output Load [pF]

Output Slope [ns] = op_sl.. = f(L)

with L = Output Load [pF]

AC Characteristics : Tj = 25°C VDD = 3.3V Typical Process

AC Characteristics

| Characteristics | Symbol | SL = 0.1 | | | SL = 2.0 | | |
|---------------------|---------|----------|---------|---------|----------|---------|---------|
| | | L = 0.2 | L = 1.4 | L = 2.0 | L = 0.2 | L = 1.4 | L = 2.0 |
| Delay A to Q | tpdar | 1.03 | 2.39 | 3.11 | 1.38 | 2.75 | 3.40 |
| | tpdaf | 0.89 | 2.02 | 2.58 | 0.99 | 2.13 | 2.66 |
| Delay B to Q | tpdbr | 1.09 | 2.44 | 3.17 | 1.45 | 2.82 | 3.53 |
| | tpdbf | 0.92 | 2.05 | 2.60 | 0.96 | 2.11 | 2.63 |
| Delay C to Q | tpdcr | 1.14 | 2.49 | 3.22 | 1.52 | 2.91 | 3.59 |
| | tpdcf | 0.93 | 2.07 | 2.59 | 0.89 | 2.03 | 2.57 |
| Delay D to Q | tpddr | 0.97 | 2.33 | 3.00 | 1.32 | 2.68 | 3.42 |
| | tpddf | 0.88 | 2.01 | 2.59 | 0.95 | 2.06 | 2.61 |
| Delay E to Q | tpder | 1.05 | 2.40 | 3.14 | 1.42 | 2.77 | 3.51 |
| | tpdef | 0.93 | 2.04 | 2.63 | 0.95 | 2.10 | 2.65 |
| Delay F to Q | tpdfr | 1.13 | 2.47 | 3.22 | 1.50 | 2.84 | 3.58 |
| | tpdff | 0.95 | 2.09 | 2.64 | 0.93 | 2.06 | 2.60 |
| Delay G to Q | tpdgr | 1.22 | 2.59 | 3.30 | 1.57 | 2.96 | 3.60 |
| | tpdgf | 0.96 | 2.08 | 2.67 | 0.89 | 2.02 | 2.57 |
| Output Slope A to Q | op_slar | 0.96 | 5.30 | 7.31 | 0.91 | 5.13 | 7.51 |
| | op_slaf | 0.73 | 3.72 | 5.08 | 0.73 | 3.62 | 4.97 |

| Characteristics | Symbol | SL = 0.1 | | | SL = 2.0 | | |
|---------------------|---------|----------|---------|---------|----------|---------|---------|
| | | L = 0.2 | L = 1.4 | L = 2.0 | L = 0.2 | L = 1.4 | L = 2.0 |
| Output Slope B to Q | op_slbr | 0.97 | 5.30 | 7.31 | 0.96 | 5.31 | 7.28 |
| | op_slbf | 0.73 | 3.71 | 5.01 | 0.72 | 3.67 | 5.02 |
| Output Slope C to Q | op_slcr | 0.95 | 5.31 | 7.35 | 0.92 | 5.16 | 7.30 |
| | op_slcf | 0.73 | 3.65 | 4.97 | 0.75 | 3.62 | 5.00 |
| Output Slope D to Q | op_slcr | 0.92 | 5.10 | 7.52 | 0.93 | 5.27 | 7.41 |
| | op_slcf | 0.72 | 3.53 | 5.12 | 0.72 | 3.56 | 5.00 |
| Output Slope E to Q | op_slcr | 0.96 | 5.30 | 7.33 | 0.95 | 5.27 | 7.36 |
| | op_slcf | 0.75 | 3.52 | 5.12 | 0.73 | 3.63 | 5.08 |
| Output Slope F to Q | op_slfr | 0.95 | 5.27 | 7.37 | 0.95 | 5.23 | 7.38 |
| | op_slff | 0.73 | 3.63 | 5.36 | 0.72 | 3.75 | 4.98 |
| Output Slope G to Q | op_slgr | 0.96 | 5.30 | 7.27 | 0.93 | 5.15 | 7.50 |
| | op_slgf | 0.73 | 3.55 | 5.13 | 0.72 | 3.81 | 4.96 |