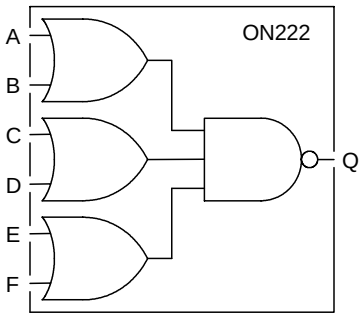
ON222 is an OR/NAND circuit providing the logical function Q = NOT [ (A+B).(C+D).(E+F) ].

## Truth Table

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




## Capacitance

| | Ci (pF) |
|---|---|
| A | 0.053 |
| B | 0.060 |
| C | 0.054 |
| D | 0.061 |
| E | 0.061 |
| F | 0.066 |

## Area

0.95 mils$^2$

## Power

3.06 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 = 0.1 | L = 0.7 | L = 1.0 | L = 0.1 | L = 0.7 | L = 1.0 |
| Delay A to Q | tpdar | 0.72 | 2.08 | 2.67 | 0.87 | 2.12 | 2.79 |
| | tpdaf | 0.46 | 1.39 | 1.77 | 0.47 | 1.32 | 1.76 |
| Delay B to Q | tpdbr | 0.69 | 1.99 | 2.69 | 0.95 | 2.18 | 2.81 |
| | tpdbf | 0.42 | 1.35 | 1.73 | 0.42 | 1.26 | 1.69 |
| Delay C to Q | tpdcr | 0.60 | 1.97 | 2.55 | 0.77 | 1.99 | 2.65 |
| | tpdcf | 0.44 | 1.34 | 1.74 | 0.52 | 1.36 | 1.79 |
| Delay D to Q | tpddr | 0.58 | 1.86 | 2.61 | 0.85 | 2.04 | 2.67 |
| | tpddf | 0.40 | 1.31 | 1.71 | 0.48 | 1.33 | 1.76 |
| Delay E to Q | tpder | 0.50 | 1.84 | 2.44 | 0.65 | 1.89 | 2.53 |
| | tpdef | 0.39 | 1.28 | 1.68 | 0.56 | 1.39 | 1.81 |
| Delay F to Q | tpdfr | 0.44 | 1.75 | 2.48 | 0.74 | 1.92 | 2.57 |
| | tpdff | 0.36 | 1.27 | 1.64 | 0.50 | 1.33 | 1.76 |

| Characteristics | Symbol | SL = 0.1 | | | SL = 2.0 | | |
|---|---|---|---|---|---|---|---|
| | | L = 0.1 | L = 0.7 | L = 1.0 | L = 0.1 | L = 0.7 | L = 1.0 |
| Output Slope A to Q | op_slar | 1.83 | 5.73 | 7.83 | 1.95 | 5.81 | 7.83 |
| | op_slaf | 1.01 | 3.65 | 4.90 | 1.17 | 3.62 | 4.93 |
| Output Slope B to Q | op_slbr | 1.87 | 5.81 | 7.73 | 2.17 | 5.88 | 7.78 |
| | op_slbf | 0.95 | 3.57 | 4.93 | 1.11 | 3.55 | 4.86 |
| Output Slope C to Q | op_slcr | 1.67 | 5.55 | 7.62 | 1.83 | 5.58 | 7.62 |
| | op_slcf | 1.02 | 3.67 | 4.90 | 1.25 | 3.67 | 4.97 |
| Output Slope D to Q | op_sldr | 1.68 | 5.57 | 7.61 | 1.90 | 5.57 | 7.61 |
| | op_sldf | 0.93 | 3.58 | 4.81 | 1.18 | 3.58 | 4.87 |
| Output Slope E to Q | op_sler | 1.53 | 5.73 | 7.76 | 1.63 | 5.76 | 7.68 |
| | op_slef | 1.02 | 3.67 | 4.88 | 1.35 | 3.73 | 5.00 |
| Output Slope F to Q | op_slfr | 1.48 | 5.63 | 7.66 | 1.75 | 5.52 | 7.65 |
| | op_slff | 0.95 | 3.56 | 4.92 | 1.27 | 3.65 | 4.88 |