**AMS**
Austria Mikro Systeme International

**EN13**

EN13 is a 2-input EXCLUSIVE-NOR (XNOR) gate with 3x drive strength.

## Truth Table

| A | B | Q |
|---|---|---|
| L | L | H |
| L | H | L |
| H | L | L |
| H | H | H |
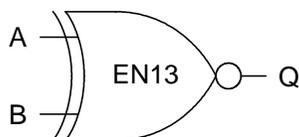


## Capacitance

|   | Ci (pF) |
|---|---------|
| A | 0.158 |
| B | 0.132 |

## Area

1.22  mils$^2$

## Power

5.86 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 = 0.3 | L = 2.1 | L = 3.0 | L = 0.3 | L = 2.1 | L = 3.0 |
| Delay A to Q | tpd_ar_qr | 0.79 | 2.26 | 2.93 | 0.98 | 2.46 | 3.18 |
|  | tpd_af_qr | 0.42 | 1.88 | 2.48 | 0.59 | 1.89 | 2.59 |
|  | tpd_ar_qf | 0.34 | 1.29 | 1.76 | 0.36 | 1.29 | 1.74 |
|  | tpd_af_qf | 0.81 | 1.77 | 2.22 | 1.15 | 2.13 | 2.60 |
| Delay B to Q | tpd_br_qr | 0.80 | 2.25 | 2.96 | 0.87 | 2.30 | 2.98 |
|  | tpd_bf_qr | 0.40 | 1.77 | 2.56 | 0.67 | 1.93 | 2.63 |
|  | tpd_br_qf | 0.31 | 1.24 | 1.74 | 0.32 | 1.26 | 1.70 |
|  | tpd_bf_qf | 0.85 | 1.80 | 2.28 | 1.20 | 2.16 | 2.61 |
| Output Slope A to Q | op_sl_ar_qr | 1.11 | 5.55 | 7.78 | 1.08 | 5.61 | 7.73 |
|  | op_sl_af_qr | 1.06 | 5.37 | 7.35 | 1.23 | 5.27 | 7.36 |
|  | op_sl_ar_qf | 0.73 | 3.43 | 4.67 | 0.96 | 3.46 | 4.78 |
|  | op_sl_af_qf | 0.83 | 3.58 | 4.81 | 0.86 | 3.51 | 4.85 |
| Output Slope B to Q | op_sl_br_qr | 1.11 | 5.57 | 7.72 | 1.05 | 5.52 | 7.91 |
|  | op_sl_bf_qr | 1.08 | 5.25 | 7.50 | 1.41 | 5.31 | 7.37 |
|  | op_sl_br_qf | 0.66 | 3.47 | 4.92 | 0.91 | 3.43 | 4.77 |
|  | op_sl_bf_qf | 0.93 | 3.46 | 4.81 | 0.96 | 3.48 | 4.77 |