

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs Library

| Cell Groups |
|------------------------------------|
| GF180MCU_OSU_SC_GP9T3V3__ADDF_1 |
| GF180MCU_OSU_SC_GP9T3V3__ADDH_1 |
| GF180MCU_OSU_SC_GP9T3V3__AND2_1 |
| GF180MCU_OSU_SC_GP9T3V3__AOI21_1 |
| GF180MCU_OSU_SC_GP9T3V3__AOI22_1 |
| GF180MCU_OSU_SC_GP9T3V3__AOI31_1 |
| GF180MCU_OSU_SC_GP9T3V3__BUF_16 |
| GF180MCU_OSU_SC_GP9T3V3__BUF_1 |
| GF180MCU_OSU_SC_GP9T3V3__BUF_2 |
| GF180MCU_OSU_SC_GP9T3V3__BUF_4 |
| GF180MCU_OSU_SC_GP9T3V3__BUF_8 |
| GF180MCU_OSU_SC_GP9T3V3__CLKBUF_16 |
| GF180MCU_OSU_SC_GP9T3V3__CLKBUF_1 |
| GF180MCU_OSU_SC_GP9T3V3__CLKBUF_2 |
| GF180MCU_OSU_SC_GP9T3V3__CLKBUF_4 |
| GF180MCU_OSU_SC_GP9T3V3__CLKBUF_8 |
| GF180MCU_OSU_SC_GP9T3V3__CLKINV_16 |
| GF180MCU_OSU_SC_GP9T3V3__CLKINV_1 |
| GF180MCU_OSU_SC_GP9T3V3__CLKINV_2 |
| GF180MCU_OSU_SC_GP9T3V3__CLKINV_4 |
| GF180MCU_OSU_SC_GP9T3V3__CLKINV_8 |
| GF180MCU_OSU_SC_GP9T3V3__DFFN_1 |
| GF180MCU_OSU_SC_GP9T3V3__DFFSR_1 |

| |
|------------------------------------|
| GF180MCU_OSU_SC_GP9T3V3__DFF_1 |
| GF180MCU_OSU_SC_GP9T3V3__DLATN_1 |
| GF180MCU_OSU_SC_GP9T3V3__DLAT_1 |
| GF180MCU_OSU_SC_GP9T3V3__INV_16 |
| GF180MCU_OSU_SC_GP9T3V3__INV_1 |
| GF180MCU_OSU_SC_GP9T3V3__INV_2 |
| GF180MCU_OSU_SC_GP9T3V3__INV_4 |
| GF180MCU_OSU_SC_GP9T3V3__INV_8 |
| GF180MCU_OSU_SC_GP9T3V3__LSHIFDOWN |
| GF180MCU_OSU_SC_GP9T3V3__LSHIFUP |
| GF180MCU_OSU_SC_GP9T3V3__MUX2_1 |
| GF180MCU_OSU_SC_GP9T3V3__NAND2_1 |
| GF180MCU_OSU_SC_GP9T3V3__NOR2_1 |
| GF180MCU_OSU_SC_GP9T3V3__OAI21_1 |
| GF180MCU_OSU_SC_GP9T3V3__OAI22_1 |
| GF180MCU_OSU_SC_GP9T3V3__OAI31_1 |
| GF180MCU_OSU_SC_GP9T3V3__OR2_1 |
| GF180MCU_OSU_SC_GP9T3V3__TBUF_16 |
| GF180MCU_OSU_SC_GP9T3V3__TBUF_1 |
| GF180MCU_OSU_SC_GP9T3V3__TBUF_2 |
| GF180MCU_OSU_SC_GP9T3V3__TBUF_4 |
| GF180MCU_OSU_SC_GP9T3V3__TBUF_8 |
| GF180MCU_OSU_SC_GP9T3V3__TIEHI |
| GF180MCU_OSU_SC_GP9T3V3__TIELO |
| GF180MCU_OSU_SC_GP9T3V3__TINV_16 |
| GF180MCU_OSU_SC_GP9T3V3__TINV_1 |

| |
|----------------------------------|
| GF180MCU_OSU_SC_GP9T3V3__TINV_2 |
| GF180MCU_OSU_SC_GP9T3V3__TINV_4 |
| GF180MCU_OSU_SC_GP9T3V3__TINV_8 |
| GF180MCU_OSU_SC_GP9T3V3__XNOR2_1 |
| GF180MCU_OSU_SC_GP9T3V3__XOR2_1 |

GF180MCU_OSU_SC_GP9T3V3__ADDF_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT | |
|-------|---|----|--------|---|
| A | B | CI | CO | S |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 |
| 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__addf_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) | |
|---------------------------------|-------------|---------|---------|-------------|---------|
| | A | B | CI | CO | S |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | 0.01543 | 0.01458 | 0.01139 | 1.55550 | 1.54990 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | 0.00000 | 0.00434 | 0.00459 |

Delay Information

Delay(ns) to CO rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A->CO (RR) | 0.20585 | 0.69708 | 7.28466 |
| | B->CO (RR) | 0.21739 | 0.80653 | 7.77409 |
| | CI->CO (RR) | 0.19557 | 0.74488 | 7.27903 |

Delay(ns) to CO falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A->CO (FF) | 0.23716 | 0.87562 | 8.06347 |
| | B->CO (FF) | 0.22283 | 0.98240 | 8.62006 |
| | CI->CO (FF) | 0.18799 | 0.95206 | 8.30552 |

Delay(ns) to S rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A->S (-R) | 0.41926 | 1.03203 | 8.51167 |
| | B->S (-R) | 0.40253 | 1.16425 | 9.24794 |
| | CI->S (-R) | 0.36765 | 1.08439 | 8.80527 |

Delay(ns) to S falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A->S (-F) | 0.24727 | 1.06331 | 9.07279 |
| | B->S (-F) | 0.29334 | 1.01143 | 8.75645 |
| | CI->S (-F) | 0.31546 | 0.93878 | 8.32990 |

Power Information

Internal switching power(pJ) to CO rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A | 0.04887 | 0.07881 | 0.36351 |
| | A | 0.08870 | 0.11843 | 0.40224 |
| | B | 0.04926 | 0.07537 | 0.32982 |
| | B | 0.08995 | 0.11667 | 0.37156 |
| | CI | 0.03598 | 0.06575 | 0.28970 |
| | CI | 0.07624 | 0.10309 | 0.32645 |

Internal switching power(pJ) to CO falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A | 0.10044 | 0.13016 | 0.41358 |
| | A | 0.06316 | 0.09294 | 0.37677 |
| | B | 0.08219 | 0.10990 | 0.36674 |
| | B | 0.04008 | 0.06796 | 0.32534 |
| | CI | 0.07598 | 0.10643 | 0.33568 |
| | CI | 0.04283 | 0.07338 | 0.30256 |

Internal switching power(pJ) to S rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A | 0.02661 | 0.06920 | 0.48450 |
| | A | 0.11051 | 0.15362 | 0.56919 |
| | B | 0.03099 | 0.08080 | 0.53361 |
| | B | 0.11235 | 0.16171 | 0.61361 |
| | CI | 0.04272 | 0.09607 | 0.60594 |
| | CI | 0.11962 | 0.17269 | 0.68256 |

Internal switching power(pJ) to S falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addf_1 | A | 0.10615 | 0.15186 | 0.57081 |
| | A | 0.01921 | 0.06505 | 0.48426 |
| | B | 0.10833 | 0.15763 | 0.61211 |
| | B | 0.03144 | 0.08092 | 0.53586 |
| | CI | 0.11726 | 0.17157 | 0.68970 |
| | CI | 0.05203 | 0.10650 | 0.62457 |

GF180MCU_OSU_SC_GP9T3V3__ADDH_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT | |
|-------|---|--------|---|
| A | B | CO | S |
| 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__addh_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) | |
|---------------------------------|-------------|---------|-------------|---------|
| | A | B | CO | S |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | 0.00767 | 0.00696 | 1.55628 | 1.55391 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | 0.00000 | 0.00347 | 0.00375 |

Delay Information

Delay(ns) to CO rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A->CO (RR) | 0.15467 | 0.64985 | 7.36131 |
| | B->CO (RR) | 0.14895 | 0.72422 | 7.77768 |

Delay(ns) to CO falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A->CO (FF) | 0.13279 | 0.75995 | 7.69113 |
| | B->CO (FF) | 0.12077 | 0.69463 | 7.25277 |

Delay(ns) to S rising (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A->S (RR) | !B | 0.16270 | 0.71195 | 7.61725 |
| | A->S (FR) | B | 0.23655 | 0.87707 | 8.21953 |
| | B->S (RR) | !A | 0.13015 | 0.60044 | 6.99760 |
| | B->S (FR) | A | 0.25391 | 0.83110 | 7.75742 |

Delay(ns) to S falling (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A->S (FF) | !B | 0.17120 | 0.73500 | 7.50836 |
| | A->S (RF) | B | 0.25202 | 0.67477 | 6.32892 |
| | B->S (FF) | !A | 0.14725 | 0.81531 | 8.02549 |
| | B->S (RF) | A | 0.24585 | 0.75724 | 6.87221 |

Power Information

Internal switching power(pJ) to CO rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A | 0.04299 | 0.08223 | 0.37997 |
| | A | 0.06130 | 0.10052 | 0.39863 |
| | B | 0.04770 | 0.08520 | 0.35633 |
| | B | 0.05977 | 0.09719 | 0.36744 |

Internal switching power(pJ) to CO falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A | 0.06008 | 0.10355 | 0.40474 |
| | A | 0.04178 | 0.08525 | 0.38649 |
| | B | 0.05943 | 0.09650 | 0.36742 |
| | B | 0.04816 | 0.08534 | 0.35620 |

Internal switching power(pJ) to S rising (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A | B | 0.06012 | 0.10349 | 0.40495 |
| | A | B | 0.04182 | 0.08524 | 0.38660 |
| | A | !B | 0.02997 | 0.09205 | 0.56649 |
| | A | !B | 0.08213 | 0.14414 | 0.61727 |
| | B | A | 0.05948 | 0.09652 | 0.36619 |
| | B | A | 0.04820 | 0.08530 | 0.35514 |
| | B | !A | 0.02096 | 0.07900 | 0.49045 |
| | B | !A | 0.05887 | 0.11681 | 0.52826 |

Internal switching power(pJ) to S falling (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__addh_1 | A | B | 0.04297 | 0.08214 | 0.37910 |
| | A | B | 0.06128 | 0.10039 | 0.39736 |
| | A | !B | 0.07202 | 0.13255 | 0.60704 |
| | A | !B | 0.01999 | 0.08077 | 0.55544 |
| | B | A | 0.04768 | 0.08502 | 0.35536 |
| | B | A | 0.05975 | 0.09696 | 0.36669 |
| | B | !A | 0.06365 | 0.12211 | 0.53310 |
| | B | !A | 0.02516 | 0.08378 | 0.49494 |

GF180MCU_OSU_SC_GP9T3V3__AND2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | x | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__and2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | 0.00404 | 0.00402 | 1.54145 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | 0.00000 | 0.00146 | 0.00208 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | A->Y (RR) | 0.12091 | 0.65220 | 7.58095 |
| | B->Y (RR) | 0.12636 | 0.58968 | 7.19291 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | A->Y (FF) | 0.10143 | 0.62890 | 7.06634 |
| | B->Y (FF) | 0.11392 | 0.70107 | 7.52062 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | A | 0.02791 | 0.10203 | 0.60303 |
| | A | 0.05101 | 0.12515 | 0.62618 |
| | B | 0.02663 | 0.10507 | 0.66141 |
| | B | 0.05501 | 0.13318 | 0.68909 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | A | 0.04428 | 0.11969 | 0.62096 |
| | A | 0.02100 | 0.09659 | 0.60403 |
| | B | 0.05603 | 0.13811 | 0.69514 |
| | B | 0.02773 | 0.11005 | 0.66733 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | (!B * !Y) | -0.01400 | -0.01412 | -0.01413 |
| | (!B * !Y) | 0.00187 | 0.00189 | 0.00178 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | (!B * !Y) | 0.01420 | 0.01431 | 0.01418 |
| | (!B * !Y) | -0.00176 | -0.00177 | -0.00175 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | (!A * !Y) | -0.01352 | -0.01360 | -0.01352 |
| | (!A * !Y) | 0.00648 | 0.00654 | 0.00646 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__and2_1 | (!A * !Y) | 0.01358 | 0.01367 | 0.01355 |
| | (!A * !Y) | -0.00640 | -0.00652 | -0.00646 |

GF180MCU_OSU_SC_GP9T3V3__AOI21_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|---|--------|
| A0 | A1 | B | Y |
| 0 | x | 0 | 1 |
| x | x | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 1 | x | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|-------------|
| | A0 | A1 | B | Y |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | 0.00395 | 0.00398 | 0.00404 | 0.78130 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | 0.00000 | 0.00095 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | A0->Y (FR) | 0.12548 | 0.84857 | 8.60718 |
| | A1->Y (FR) | 0.10104 | 0.81316 | 8.52901 |
| | B->Y (FR) | 0.09169 | 1.00457 | 9.87220 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | A0->Y (RF) | 0.09477 | 0.58210 | 6.15213 |
| | A1->Y (RF) | 0.08832 | 0.72225 | 7.33025 |
| | B->Y (RF) | 0.04221 | 0.47554 | 5.35620 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | A0 | 0.04812 | 0.08538 | 0.28720 |
| | A0 | 0.01017 | 0.04724 | 0.24915 |
| | A1 | 0.03578 | 0.07111 | 0.25783 |
| | A1 | 0.00294 | 0.03791 | 0.22455 |
| | B | 0.02638 | 0.07697 | 0.30014 |
| | B | 0.00387 | 0.05445 | 0.27768 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | A0 | 0.01571 | 0.05307 | 0.23767 |
| | A0 | 0.05345 | 0.09097 | 0.27532 |
| | A1 | 0.01624 | 0.05172 | 0.21206 |
| | A1 | 0.04889 | 0.08447 | 0.24502 |
| | B | 0.00014 | 0.04677 | 0.25198 |
| | B | 0.02266 | 0.06934 | 0.27849 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (A1 * B * !Y) | -0.01313 | -0.01339 | -0.01331 |
| | (A1 * B * !Y) | 0.00659 | 0.00658 | 0.00651 |
| | (!A1 * B * !Y) | -0.01352 | -0.01358 | -0.01352 |
| | (!A1 * B * !Y) | 0.00649 | 0.00654 | 0.00647 |
| | (!A1 * !B * Y) | -0.01351 | -0.01352 | -0.01352 |
| | (!A1 * !B * Y) | 0.00649 | 0.00646 | 0.00646 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (A1 * B * !Y) | 0.01337 | 0.01339 | 0.01331 |
| | (A1 * B * !Y) | -0.00648 | -0.00652 | -0.00649 |
| | (!A1 * B * !Y) | 0.01367 | 0.01367 | 0.01355 |
| | (!A1 * B * !Y) | -0.00639 | -0.00652 | -0.00647 |
| | (!A1 * !B * Y) | 0.01358 | 0.01366 | 0.01355 |
| | (!A1 * !B * Y) | -0.00639 | -0.00646 | -0.00646 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (B * !Y) | -0.01315 | -0.01339 | -0.01333 |
| | (B * !Y) | 0.00656 | 0.00658 | 0.00651 |
| | (!A0 * !B * Y) | -0.01399 | -0.01412 | -0.01413 |
| | (!A0 * !B * Y) | 0.00187 | 0.00188 | 0.00178 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (B * !Y) | 0.01337 | 0.01339 | 0.01333 |
| | (B * !Y) | -0.00649 | -0.00651 | -0.00649 |
| | (!A0 * !B * Y) | 0.01424 | 0.01430 | 0.01418 |
| | (!A0 * !B * Y) | -0.00176 | -0.00177 | -0.00175 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (A0 * A1 * !Y) | -0.00461 | -0.00456 | -0.00451 |
| | (A0 * A1 * !Y) | 0.00790 | 0.00786 | 0.00780 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi21_1 | (A0 * A1 * !Y) | 0.00495 | 0.00497 | 0.00463 |
| | (A0 * A1 * !Y) | -0.00734 | -0.00745 | -0.00779 |

GF180MCU_OSU_SC_GP9T3V3__AOI22_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | | OUTPUT |
|-------|----|----|----|--------|
| A0 | A1 | B0 | B1 | Y |
| 0 | x | 0 | x | 1 |
| 0 | x | 1 | 0 | 1 |
| x | x | 1 | 1 | 0 |
| 1 | 0 | 0 | x | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | x | x | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|---------|-------------|
| | A0 | A1 | B0 | B1 | Y |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | 0.00395 | 0.00398 | 0.00404 | 0.00402 | 0.77202 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | 0.00000 | 0.00123 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | A0->Y (FR) | 0.17213 | 0.89100 | 8.57616 |
| | A1->Y (FR) | 0.14831 | 0.85632 | 8.49813 |
| | B0->Y (FR) | 0.10389 | 0.98572 | 9.65346 |
| | B1->Y (FR) | 0.12623 | 1.01964 | 9.71440 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | A0->Y (RF) | 0.13668 | 0.63055 | 6.18231 |
| | A1->Y (RF) | 0.12991 | 0.77413 | 7.35755 |
| | B0->Y (RF) | 0.06829 | 0.68232 | 7.25666 |
| | B1->Y (RF) | 0.07320 | 0.54700 | 6.07316 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | A0 | 0.05781 | 0.09406 | 0.30180 |
| | A0 | 0.01022 | 0.04639 | 0.25415 |
| | A1 | 0.04575 | 0.07997 | 0.27119 |
| | A1 | 0.00309 | 0.03698 | 0.22854 |
| | B0 | 0.02810 | 0.06829 | 0.24370 |
| | B0 | 0.00430 | 0.04440 | 0.21941 |
| | B1 | 0.03957 | 0.08293 | 0.27062 |
| | B1 | 0.01079 | 0.05417 | 0.24150 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | A0 | 0.03098 | 0.06975 | 0.27357 |
| | A0 | 0.07847 | 0.11725 | 0.32086 |
| | A1 | 0.03154 | 0.06898 | 0.24727 |
| | A1 | 0.07376 | 0.11141 | 0.28950 |
| | B0 | 0.00664 | 0.04533 | 0.21440 |
| | B0 | 0.03044 | 0.06925 | 0.24098 |
| | B1 | 0.00547 | 0.04572 | 0.23691 |
| | B1 | 0.03429 | 0.07470 | 0.26575 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | (A1 * B0 * B1 * !Y) | -0.01304 | -0.01331 | -0.01331 |
| | (A1 * B0 * B1 * !Y) | 0.00654 | 0.00658 | 0.00651 |
| | (!A1 * B0 * B1 * !Y) | -0.01354 | -0.01355 | -0.01352 |
| | (!A1 * B0 * B1 * !Y) | 0.00649 | 0.00647 | 0.00646 |
| | (!A1 * B0 * !B1 * Y) | -0.01353 | -0.01356 | -0.01352 |
| | (!A1 * B0 * !B1 * Y) | 0.00650 | 0.00650 | 0.00648 |
| | (!A1 * !B0 * Y) | -0.01353 | -0.01356 | -0.01352 |
| | (!A1 * !B0 * Y) | 0.00650 | 0.00650 | 0.00648 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | (A1 * B0 * B1 * !Y) | 0.01333 | 0.01331 | 0.01331 |
| | (A1 * B0 * B1 * !Y) | -0.00648 | -0.00649 | -0.00649 |
| | (!A1 * B0 * B1 * !Y) | 0.01358 | 0.01367 | 0.01355 |
| | (!A1 * B0 * B1 * !Y) | -0.00639 | -0.00647 | -0.00646 |
| | (!A1 * B0 * !B1 * Y) | 0.01358 | 0.01366 | 0.01355 |
| | (!A1 * B0 * !B1 * Y) | -0.00641 | -0.00650 | -0.00647 |
| | (!A1 * !B0 * Y) | 0.01358 | 0.01366 | 0.01355 |
| | (!A1 * !B0 * Y) | -0.00641 | -0.00650 | -0.00647 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | $(B0 * B1 * !Y)$ | -0.01310 | -0.01337 | -0.01331 |
| | $(B0 * B1 * !Y)$ | 0.00654 | 0.00658 | 0.00651 |
| | $(!A0 * B0 * !B1 * Y)$ | -0.01410 | -0.01412 | -0.01413 |
| | $(!A0 * B0 * !B1 * Y)$ | 0.00190 | 0.00188 | 0.00178 |
| | $(!A0 * !B0 * Y)$ | -0.01410 | -0.01412 | -0.01413 |
| | $(!A0 * !B0 * Y)$ | 0.00190 | 0.00188 | 0.00178 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | $(B0 * B1 * !Y)$ | 0.01335 | 0.01337 | 0.01331 |
| | $(B0 * B1 * !Y)$ | -0.00649 | -0.00650 | -0.00649 |
| | $(!A0 * B0 * !B1 * Y)$ | 0.01422 | 0.01430 | 0.01418 |
| | $(!A0 * B0 * !B1 * Y)$ | -0.00175 | -0.00177 | -0.00175 |
| | $(!A0 * !B0 * Y)$ | 0.01422 | 0.01430 | 0.01418 |
| | $(!A0 * !B0 * Y)$ | -0.00175 | -0.00177 | -0.00175 |

Passive power(pJ) for B0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | $(A0 * A1 * !Y)$ | -0.00456 | -0.00456 | -0.00451 |
| | $(A0 * A1 * !Y)$ | 0.00780 | 0.00786 | 0.00780 |
| | $(!A1 * !B1 * Y)$ | -0.01407 | -0.01403 | -0.01414 |
| | $(!A1 * !B1 * Y)$ | 0.00189 | 0.00187 | 0.00178 |
| | $(!A0 * A1 * !B1 * Y)$ | -0.01407 | -0.01403 | -0.01414 |
| | $(!A0 * A1 * !B1 * Y)$ | 0.00189 | 0.00187 | 0.00178 |

Passive power(pJ) for B0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | (A0 * A1 * !Y) | 0.00509 | 0.00511 | 0.00465 |
| | (A0 * A1 * !Y) | -0.00719 | -0.00730 | -0.00777 |
| | (!A1 * !B1 * Y) | 0.01422 | 0.01428 | 0.01417 |
| | (!A1 * !B1 * Y) | -0.00178 | -0.00177 | -0.00175 |
| | (!A0 * A1 * !B1 * Y) | 0.01421 | 0.01428 | 0.01417 |
| | (!A0 * A1 * !B1 * Y) | -0.00178 | -0.00177 | -0.00175 |

Passive power(pJ) for B1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | (A0 * A1 * !Y) | -0.00453 | -0.00456 | -0.00451 |
| | (A0 * A1 * !Y) | 0.00782 | 0.00785 | 0.00780 |
| | (!A1 * !B0 * Y) | -0.01351 | -0.01359 | -0.01352 |
| | (!A1 * !B0 * Y) | 0.00645 | 0.00651 | 0.00644 |
| | (!A0 * A1 * !B0 * Y) | -0.01351 | -0.01359 | -0.01352 |
| | (!A0 * A1 * !B0 * Y) | 0.00645 | 0.00651 | 0.00644 |

Passive power(pJ) for B1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi22_1 | (A0 * A1 * !Y) | 0.00509 | 0.00510 | 0.00465 |
| | (A0 * A1 * !Y) | -0.00718 | -0.00730 | -0.00777 |
| | (!A1 * !B0 * Y) | 0.01355 | 0.01364 | 0.01354 |
| | (!A1 * !B0 * Y) | -0.00642 | -0.00651 | -0.00644 |
| | (!A0 * A1 * !B0 * Y) | 0.01355 | 0.01364 | 0.01354 |
| | (!A0 * A1 * !B0 * Y) | -0.00642 | -0.00651 | -0.00644 |

GF180MCU_OSU_SC_GP9T3V3__AOI31_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | | OUTPUT |
|-------|----|----|---|--------|
| A0 | A1 | A2 | B | Y |
| 0 | x | x | 0 | 1 |
| x | x | x | 1 | 0 |
| 1 | 0 | x | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | x | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|---------|-------------|
| | A0 | A1 | A2 | B | Y |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | 0.00395 | 0.00398 | 0.00395 | 0.00405 | 0.74982 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | 0.00000 | 0.00098 | 0.00194 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | A0->Y (FR) | 0.13465 | 0.82305 | 8.22635 |
| | A1->Y (FR) | 0.10934 | 0.78987 | 8.16413 |
| | A2->Y (FR) | 0.15251 | 0.85519 | 8.29414 |
| | B->Y (FR) | 0.10807 | 1.01662 | 9.64281 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | A0->Y (RF) | 0.13934 | 0.79311 | 7.96315 |
| | A1->Y (RF) | 0.12166 | 0.89351 | 8.81714 |
| | A2->Y (RF) | 0.14960 | 0.68000 | 7.06367 |
| | B->Y (RF) | 0.04182 | 0.47221 | 5.22496 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | A0 | 0.04951 | 0.07862 | 0.24580 |
| | A0 | 0.01072 | 0.03955 | 0.20679 |
| | A1 | 0.03710 | 0.06525 | 0.22237 |
| | A1 | 0.00327 | 0.03119 | 0.18823 |
| | A2 | 0.06127 | 0.09203 | 0.27109 |
| | A2 | 0.01757 | 0.04813 | 0.22732 |
| | B | 0.02646 | 0.08031 | 0.32062 |
| | B | 0.00400 | 0.05747 | 0.29742 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | A0 | 0.02082 | 0.05091 | 0.20281 |
| | A0 | 0.05953 | 0.08978 | 0.24203 |
| | A1 | 0.02138 | 0.05084 | 0.19068 |
| | A1 | 0.05494 | 0.08446 | 0.22443 |
| | A2 | 0.02073 | 0.05400 | 0.23770 |
| | A2 | 0.06436 | 0.09780 | 0.28142 |
| | B | -0.00007 | 0.04923 | 0.27075 |
| | B | 0.02244 | 0.07186 | 0.29658 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | $(A1 * B * !Y)$ | -0.01307 | -0.01337 | -0.01330 |
| | $(A1 * B * !Y)$ | 0.00656 | 0.00658 | 0.00651 |
| | $(A1 * !A2 * !B * Y) + (!A1 * !B * Y)$ | -0.01359 | -0.01360 | -0.01350 |
| | $(A1 * !A2 * !B * Y) + (!A1 * !B * Y)$ | 0.00238 | 0.00237 | 0.00235 |
| | $(!A1 * B * !Y)$ | -0.01352 | -0.01353 | -0.01352 |
| | $(!A1 * B * !Y)$ | 0.00645 | 0.00648 | 0.00644 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | $(A1 * B * !Y)$ | 0.01331 | 0.01337 | 0.01330 |
| | $(A1 * B * !Y)$ | -0.00649 | -0.00651 | -0.00649 |
| | $(A1 * !A2 * !B * Y) + (!A1 * !B * Y)$ | 0.01373 | 0.01378 | 0.01359 |
| | $(A1 * !A2 * !B * Y) + (!A1 * !B * Y)$ | -0.00223 | -0.00225 | -0.00229 |
| | $(!A1 * B * !Y)$ | 0.01352 | 0.01353 | 0.01355 |
| | $(!A1 * B * !Y)$ | -0.00636 | -0.00645 | -0.00644 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | (A0 * B * !Y) | -0.01304 | -0.01338 | -0.01330 |
| | (A0 * B * !Y) | 0.00652 | 0.00658 | 0.00651 |
| | (A0 * !A2 * !B * Y) | -0.01393 | -0.01397 | -0.01411 |
| | (A0 * !A2 * !B * Y) | 0.00198 | 0.00196 | 0.00175 |
| | (!A0 * B * !Y) | -0.01355 | -0.01362 | -0.01352 |
| | (!A0 * B * !Y) | 0.00645 | 0.00650 | 0.00644 |
| | (!A0 * !B * Y) | -0.01409 | -0.01412 | -0.01413 |
| | (!A0 * !B * Y) | 0.00190 | 0.00188 | 0.00178 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | (A0 * B * !Y) | 0.01349 | 0.01338 | 0.01330 |
| | (A0 * B * !Y) | -0.00650 | -0.00652 | -0.00649 |
| | (A0 * !A2 * !B * Y) | 0.01423 | 0.01430 | 0.01418 |
| | (A0 * !A2 * !B * Y) | -0.00173 | -0.00174 | -0.00172 |
| | (!A0 * B * !Y) | 0.01371 | 0.01369 | 0.01355 |
| | (!A0 * B * !Y) | -0.00639 | -0.00648 | -0.00644 |
| | (!A0 * !B * Y) | 0.01423 | 0.01430 | 0.01418 |
| | (!A0 * !B * Y) | -0.00175 | -0.00177 | -0.00175 |

Passive power(pJ) for A2 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | $(A0 * A1 * B * !Y)$ | -0.01303 | -0.01333 | -0.01329 |
| | $(A0 * A1 * B * !Y)$ | 0.00654 | 0.00658 | 0.00651 |
| | $(A0 * !A1 * B * !Y)$ | -0.01352 | -0.01361 | -0.01352 |
| | $(A0 * !A1 * B * !Y)$ | 0.00640 | 0.00644 | 0.00638 |
| | $(A0 * !A1 * !B * Y) + (!A0 * A1 * !B * Y)$ | -0.01350 | -0.01361 | -0.01352 |
| | $(A0 * !A1 * !B * Y) + (!A0 * A1 * !B * Y)$ | 0.00641 | 0.00646 | 0.00640 |
| | $(!A0 * B * !Y)$ | -0.01354 | -0.01355 | -0.01352 |
| | $(!A0 * B * !Y)$ | 0.00649 | 0.00647 | 0.00646 |
| | $(!A0 * !A1 * !B * Y)$ | -0.01353 | -0.01358 | -0.01352 |
| | $(!A0 * !A1 * !B * Y)$ | 0.00649 | 0.00656 | 0.00648 |

Passive power(pJ) for A2 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | $(A0 * A1 * B * !Y)$ | 0.01331 | 0.01333 | 0.01329 |
| | $(A0 * A1 * B * !Y)$ | -0.00649 | -0.00650 | -0.00649 |
| | $(A0 * !A1 * B * !Y)$ | 0.01356 | 0.01367 | 0.01355 |
| | $(A0 * !A1 * B * !Y)$ | -0.00622 | -0.00644 | -0.00638 |
| | $(A0 * !A1 * !B * Y) + (!A0 * A1 * !B * Y)$ | 0.01372 | 0.01366 | 0.01355 |
| | $(A0 * !A1 * !B * Y) + (!A0 * A1 * !B * Y)$ | -0.00623 | -0.00646 | -0.00640 |
| | $(!A0 * B * !Y)$ | 0.01358 | 0.01367 | 0.01355 |
| | $(!A0 * B * !Y)$ | -0.00639 | -0.00647 | -0.00646 |
| | $(!A0 * !A1 * !B * Y)$ | 0.01354 | 0.01366 | 0.01355 |
| | $(!A0 * !A1 * !B * Y)$ | -0.00640 | -0.00652 | -0.00647 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | (A0 * A1 * A2 * !Y) | -0.00454 | -0.00457 | -0.00451 |
| | (A0 * A1 * A2 * !Y) | 0.00781 | 0.00786 | 0.00780 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__aoi31_1 | (A0 * A1 * A2 * !Y) | 0.00509 | 0.00510 | 0.00465 |
| | (A0 * A1 * A2 * !Y) | -0.00719 | -0.00730 | -0.00777 |

GF180MCU_OSU_SC_GP9T3V3__BUF_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__buf_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|---------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | 0.00404 | 24.76612 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | 0.00000 | 0.01267 | 0.01499 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | A->Y (RR) | 0.33754 | 0.79801 | 7.91918 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | A->Y (FF) | 0.36409 | 0.97238 | 8.58056 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | A | 0.71260 | 0.73169 | 1.14194 |
| | A | 0.73444 | 0.75355 | 1.14522 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_16 | A | 0.78739 | 0.77302 | 1.12733 |
| | A | 0.76551 | 0.75116 | 1.10816 |

GF180MCU_OSU_SC_GP9T3V3__BUF_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__buf_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | 0.00405 | 1.55566 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | 0.00000 | 0.00149 | 0.00149 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | A->Y (RR) | 0.08426 | 0.50781 | 6.93348 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | A->Y (FF) | 0.09264 | 0.66519 | 7.59185 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | A | 0.02013 | 0.10920 | 0.69832 |
| | A | 0.04198 | 0.13108 | 0.72018 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_1 | A | 0.04221 | 0.13434 | 0.72073 |
| | A | 0.02040 | 0.11249 | 0.69903 |

GF180MCU_OSU_SC_GP9T3V3__BUF_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__buf_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | 0.00404 | 3.10294 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | 0.00000 | 0.00224 | 0.00239 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | A->Y (RR) | 0.10055 | 0.47431 | 7.01509 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | A->Y (FF) | 0.10963 | 0.64043 | 7.67275 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | A | 0.04221 | 0.13201 | 0.71774 |
| | A | 0.06414 | 0.15388 | 0.73960 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_2 | A | 0.06406 | 0.15612 | 0.73814 |
| | A | 0.04206 | 0.13431 | 0.71640 |

GF180MCU_OSU_SC_GP9T3V3__BUF_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__buf_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | 0.00404 | 6.15334 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | 0.00000 | 0.00373 | 0.00419 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | A->Y (RR) | 0.13464 | 0.50150 | 7.13109 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | A->Y (FF) | 0.14592 | 0.67397 | 7.79491 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | A | 0.09366 | 0.18701 | 0.76428 |
| | A | 0.11572 | 0.20872 | 0.78373 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_4 | A | 0.11749 | 0.21027 | 0.78112 |
| | A | 0.09536 | 0.18852 | 0.76264 |

GF180MCU_OSU_SC_GP9T3V3__BUF_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__buf_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | 0.00404 | 12.28096 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | 0.00000 | 0.00671 | 0.00779 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | A->Y (RR) | 0.20308 | 0.60328 | 7.39814 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | A->Y (FF) | 0.21924 | 0.78004 | 8.06740 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | A | 0.23904 | 0.33421 | 0.87603 |
| | A | 0.26101 | 0.35591 | 0.88880 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__buf_8 | A | 0.27241 | 0.35418 | 0.87944 |
| | A | 0.25041 | 0.33282 | 0.86069 |

GF180MCU_OSU_SC_GP9T3V3__CLKBUF_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|------------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|------------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | 0.00404 | 24.76612 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|------------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | 0.00000 | 0.01267 | 0.01499 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | A->Y (RR) | 0.33754 | 0.79801 | 7.91918 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | A->Y (FF) | 0.36409 | 0.97238 | 8.58056 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|------------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | A | 0.71260 | 0.73169 | 1.14194 |
| | A | 0.73444 | 0.75355 | 1.14522 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|------------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_16 | A | 0.78739 | 0.77302 | 1.12733 |
| | A | 0.76551 | 0.75116 | 1.10816 |

GF180MCU_OSU_SC_GP9T3V3__CLKBUF_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | 0.00405 | 1.55566 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | 0.00000 | 0.00149 | 0.00149 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | A->Y (RR) | 0.08426 | 0.50781 | 6.93348 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | A->Y (FF) | 0.09264 | 0.66519 | 7.59185 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | A | 0.02013 | 0.10920 | 0.69832 |
| | A | 0.04198 | 0.13108 | 0.72018 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_1 | A | 0.04221 | 0.13434 | 0.72073 |
| | A | 0.02040 | 0.11249 | 0.69903 |

GF180MCU_OSU_SC_GP9T3V3__CLKBUF_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | 0.00404 | 3.10294 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | 0.00000 | 0.00224 | 0.00239 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | A->Y (RR) | 0.10055 | 0.47431 | 7.01509 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | A->Y (FF) | 0.10963 | 0.64043 | 7.67275 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | A | 0.04221 | 0.13201 | 0.71774 |
| | A | 0.06414 | 0.15388 | 0.73960 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_2 | A | 0.06406 | 0.15612 | 0.73814 |
| | A | 0.04206 | 0.13431 | 0.71640 |

GF180MCU_OSU_SC_GP9T3V3__CLKBUF_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | 0.00404 | 6.15334 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | 0.00000 | 0.00373 | 0.00419 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | A->Y (RR) | 0.13464 | 0.50150 | 7.13109 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | A->Y (FF) | 0.14592 | 0.67397 | 7.79491 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | A | 0.09366 | 0.18701 | 0.76428 |
| | A | 0.11572 | 0.20872 | 0.78373 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_4 | A | 0.11749 | 0.21027 | 0.78112 |
| | A | 0.09536 | 0.18852 | 0.76264 |

GF180MCU_OSU_SC_GP9T3V3__CLKBUF_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | 1 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | 0.00404 | 12.28096 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | 0.00000 | 0.00671 | 0.00779 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | A->Y (RR) | 0.20308 | 0.60328 | 7.39814 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | A->Y (FF) | 0.21924 | 0.78004 | 8.06740 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | A | 0.23904 | 0.33421 | 0.87603 |
| | A | 0.26101 | 0.35591 | 0.88880 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkbuf_8 | A | 0.27241 | 0.35418 | 0.87944 |
| | A | 0.25041 | 0.33282 | 0.86069 |

GF180MCU_OSU_SC_GP9T3V3__CLKINV_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ecs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|------------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|------------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | 0.06466 | 23.87903 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|------------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | 0.00000 | 0.01192 | 0.01439 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | A->Y (FR) | 0.03956 | 0.49677 | 9.96266 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | A->Y (RF) | 0.03092 | 0.29391 | 8.47767 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|------------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | A | 0.35769 | 1.48564 | 4.08772 |
| | A | 0.00871 | 1.13458 | 3.73679 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|------------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_16 | A | 0.00389 | 1.07024 | 3.39414 |
| | A | 0.35277 | 1.42158 | 3.74746 |

GF180MCU_OSU_SC_GP9T3V3__CLKINV_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | 0.00404 | 1.50748 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | 0.00000 | 0.00075 | 0.00090 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | A->Y (FR) | 0.04498 | 0.84197 | 10.02570 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | A->Y (RF) | 0.03639 | 0.64312 | 8.53517 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | A | 0.02226 | 0.07404 | 0.25366 |
| | A | 0.00038 | 0.05208 | 0.23179 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_1 | A | -0.00053 | 0.04771 | 0.21052 |
| | A | 0.02128 | 0.06976 | 0.23249 |

GF180MCU_OSU_SC_GP9T3V3__CLKINV_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | 0.00808 | 2.98498 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | 0.00000 | 0.00149 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | A->Y (FR) | 0.04172 | 0.72858 | 9.96233 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | A->Y (RF) | 0.03307 | 0.52906 | 8.47738 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | A | 0.04475 | 0.15897 | 0.51097 |
| | A | 0.00091 | 0.11480 | 0.46711 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_2 | A | -0.00109 | 0.10609 | 0.42288 |
| | A | 0.04270 | 0.15004 | 0.46704 |

GF180MCU_OSU_SC_GP9T3V3__CLKINV_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | 0.01616 | 5.97048 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | 0.00000 | 0.00298 | 0.00360 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | A->Y (FR) | 0.04000 | 0.63574 | 9.96289 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | A->Y (RF) | 0.03137 | 0.43650 | 8.47788 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | A | 0.08959 | 0.33578 | 1.02191 |
| | A | 0.00205 | 0.24768 | 0.93418 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_4 | A | -0.00200 | 0.23109 | 0.84572 |
| | A | 0.08550 | 0.31888 | 0.93405 |

GF180MCU_OSU_SC_GP9T3V3__CLKINV_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|-----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|-----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | 0.03232 | 11.94140 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|-----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | 0.00000 | 0.00596 | 0.00720 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | A->Y (FR) | 0.03912 | 0.55929 | 9.96313 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|-----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | A->Y (RF) | 0.03045 | 0.35837 | 8.47809 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | A | 0.17894 | 0.70851 | 2.04380 |
| | A | 0.00445 | 0.53241 | 1.86833 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|-----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__clkinv_8 | A | -0.00375 | 0.49690 | 1.69140 |
| | A | 0.17077 | 0.67287 | 1.86807 |

GF180MCU_OSU_SC_GP9T3V3__DFFN_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT | |
|-------|------|--------|-----|
| D | CLKN | Q | QN |
| 0 | R | 0 | 1 |
| 1 | R | 1 | 0 |
| x | x | IQ | IQN |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) | |
|---------------------------------|-------------|---------|-------------|---------|
| | D | CLKN | Q | QN |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | 0.00393 | 0.01039 | 1.56141 | 1.56075 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | 0.00000 | 0.00595 | 0.00661 |

Delay Information

Delay(ns) to Q rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN->Q (RR) | 0.26942 | 1.25620 | 16.48390 |
| | QN->Q (FR) | 0.04498 | 0.85148 | 10.25460 |

Delay(ns) to Q falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN->Q (RF) | 0.35742 | 1.28545 | 16.29670 |
| | QN->Q (RF) | 0.03639 | 0.65226 | 8.74007 |

Delay(ns) to QN rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN->QN (RR) | 0.32250 | 0.75813 | 6.99720 |

Delay(ns) to QN falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN->QN (RF) | 0.23125 | 0.67320 | 6.16788 |

Constraint Information

Constraints(ns) for D rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|--------------|----------------|-------------------------|----------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | hold | CLKN (R) | -0.10101 | -0.09519 | 0.57241 |
| | setup | CLKN (R) | 0.19078 | 0.25850 | 0.88708 |

Constraints(ns) for D falling :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | hold | CLKN (R) | -0.20420 | -0.60089 | -4.76816 |
| | setup | CLKN (R) | 0.22179 | 0.61438 | 5.15952 |

Constraints(ns) for CLKN rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | min_pulse_width | CLKN () | 0.15531 | 1.45630 | 16.50020 |
| | min_pulse_width | CLKN () | 0.18900 | 1.45630 | 16.50020 |

Constraints(ns) for CLKN falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | min_pulse_width | CLKN () | 0.25379 | 1.45630 | 16.50020 |
| | min_pulse_width | CLKN () | 0.18123 | 1.45630 | 16.50020 |

Power Information

Internal switching power(pJ) to Q rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | 0.04946 | 0.12984 | 0.64377 |
| | CLKN | 0.07753 | 0.15803 | 0.67514 |

Internal switching power(pJ) to Q falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | 0.05842 | 0.10745 | 0.50368 |
| | CLKN | 0.07991 | 0.12830 | 0.52377 |

Internal switching power(pJ) to QN rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | 0.05840 | 0.10719 | 0.50270 |
| | CLKN | 0.07989 | 0.12852 | 0.52401 |

Internal switching power(pJ) to QN falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | 0.04937 | 0.12979 | 0.64122 |
| | CLKN | 0.07744 | 0.15791 | 0.67139 |

Passive power(pJ) for D rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | -0.01322 | -0.01338 | -0.01335 |
| | CLKN | 0.00655 | 0.00647 | 0.00649 |
| | (!CLKN * Q * !QN) + (!CLKN * !Q * QN) | 0.05982 | 0.13524 | 0.71342 |
| | (!CLKN * Q * !QN) + (!CLKN * !Q * QN) | 0.09138 | 0.16690 | 0.74479 |

Passive power(pJ) for D falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | CLKN | 0.01350 | 0.01350 | 0.01335 |
| | CLKN | -0.00644 | -0.00647 | -0.00648 |
| | (!CLKN * Q * !QN) + (!CLKN * !Q * QN) | 0.09185 | 0.16885 | 0.74724 |
| | (!CLKN * Q * !QN) + (!CLKN * !Q * QN) | 0.06027 | 0.13728 | 0.71567 |

Passive power(pJ) for CLKN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | (D * Q * !QN) | -0.00022 | 0.08422 | 0.66646 |
| | (D * Q * !QN) | 0.04664 | 0.13102 | 0.71314 |
| | (!D * !Q * QN) | -0.00083 | 0.08453 | 0.66610 |
| | (!D * !Q * QN) | 0.05312 | 0.13836 | 0.71997 |

Passive power(pJ) for CLKN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffn_1 | (D * Q * !QN) | 0.04730 | 0.13539 | 0.71738 |
| | (D * Q * !QN) | 0.00048 | 0.08841 | 0.67051 |
| | (D * !Q * QN) | 0.12427 | 0.21430 | 0.99209 |
| | (D * !Q * QN) | 0.08251 | 0.17233 | 0.94983 |
| | (!D * Q * !QN) | 0.12089 | 0.27488 | 1.16805 |
| | (!D * Q * !QN) | 0.06421 | 0.21785 | 1.11108 |
| | (!D * !Q * QN) | 0.05375 | 0.13922 | 0.72024 |
| | (!D * !Q * QN) | -0.00032 | 0.08498 | 0.66630 |

GF180MCU_OSU_SC_GP9T3V3__DFFSR_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | | OUTPUT | |
|-------|----|----|-----|--------|-----|
| D | RN | SN | CLK | Q | QN |
| 0 | 1 | 1 | R | 0 | 1 |
| 1 | 1 | 1 | R | 1 | 0 |
| x | 0 | x | x | 0 | 1 |
| x | 1 | 0 | x | 1 | 0 |
| x | 1 | 1 | x | IQ | IQN |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) | |
|----------------------------------|-------------|---------|---------|---------|-------------|---------|
| | D | RN | SN | CLK | Q | QN |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | 0.00393 | 0.00405 | 0.00802 | 0.01039 | 1.54794 | 1.55977 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | 0.00000 | 0.00708 | 0.00862 |

Delay Information

Delay(ns) to Q rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK->Q (RR) | 0.39152 | 1.36998 | 16.45910 |
| | QN->Q (FR) | 0.04498 | 0.84959 | 10.19690 |
| | RN->Q (RR) | 0.28691 | 1.26458 | 16.47060 |
| | SN->Q (FR) | 0.26970 | 1.36489 | 17.32570 |

Delay(ns) to Q falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK->Q (RF) | 0.44884 | 1.38495 | 16.25880 |
| | QN->Q (RF) | 0.03639 | 0.65027 | 8.68858 |
| | RN->Q (FF) | 0.25479 | 1.37924 | 17.40650 |

Delay(ns) to QN rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK->QN (RR) | 0.41343 | 0.86099 | 7.09321 |
| | RN->QN (FR) | 0.21980 | 0.85598 | 8.24101 |

Delay(ns) to QN falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK->QN (RF) | 0.34947 | 0.79178 | 6.28325 |
| | RN->QN (RF) | 0.24559 | 0.68577 | 6.29256 |
| | SN->QN (FF) | 0.22847 | 0.78577 | 7.14017 |

Constraint Information

Constraints(ns) for D rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | hold | CLK (R) | -0.14469 | -0.12515 | 0.54748 |
| | setup | CLK (R) | 0.29476 | 0.37169 | 0.69818 |

Constraints(ns) for D falling :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | hold | CLK (R) | -0.23016 | -0.60573 | -5.00636 |
| | setup | CLK (R) | 0.26622 | 0.62665 | 5.14907 |

Constraints(ns) for D rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | hold | CLK (R) | -0.14469 | -0.12515 | 0.54748 |
| | setup | CLK (R) | 0.29476 | 0.37169 | 0.69818 |

Constraints(ns) for D falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | hold | CLK (R) | -0.23016 | -0.60573 | -5.00636 |
| | setup | CLK (R) | 0.26622 | 0.62665 | 5.14907 |

Constraints(ns) for RN rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | recovery | CLK (R) | 0.17521 | 0.29401 | 1.45846 |
| | removal | CLK (R) | -0.01563 | -0.01947 | -0.04919 |
| | hold | SN (R) | -0.21059 | -0.41752 | -0.83190 |
| | setup | SN (R) | 0.24903 | 0.56181 | 5.27872 |

Constraints(ns) for RN rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | recovery | CLK (R) | 0.17521 | 0.29401 | 1.45846 |
| | removal | CLK (R) | -0.01563 | -0.01947 | -0.04919 |
| | hold | SN (R) | -0.21059 | -0.41752 | -0.83192 |
| | hold | SN (R) | -0.21242 | -0.41968 | -0.83190 |
| | setup | SN (R) | 0.24614 | 0.55781 | 5.20954 |
| | setup | SN (R) | 0.24903 | 0.56181 | 5.27872 |

Constraints(ns) for RN falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | min_pulse_width | RN () | 0.16568 | 1.45630 | 16.50020 |
| | min_pulse_width | RN () | 0.16568 | 1.45630 | 16.50020 |

Constraints(ns) for SN rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | recovery | CLK (R) | 0.07717 | 0.17001 | 5.62369 |
| | removal | CLK (R) | -0.03673 | -0.08870 | -0.61887 |

Constraints(ns) for SN rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | recovery | CLK (R) | 0.07717 | 0.17001 | 5.62369 |
| | removal | CLK (R) | -0.03673 | -0.08870 | -0.61887 |

Constraints(ns) for SN falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | min_pulse_width | SN () | 0.22788 | 1.45630 | 16.50020 |
| | min_pulse_width | SN () | 0.23047 | 1.45630 | 16.50020 |

Constraints(ns) for CLK rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | min_pulse_width | CLK () | 0.20714 | 1.45630 | 16.50020 |
| | min_pulse_width | CLK () | 0.23047 | 1.45630 | 16.50020 |

Constraints(ns) for CLK falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | min_pulse_width | CLK () | 0.35746 | 1.45630 | 16.50020 |
| | min_pulse_width | CLK () | 0.22788 | 1.45630 | 16.50020 |

Power Information

Internal switching power(pJ) to Q rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | 0.06467 | 0.13937 | 0.65038 |
| | CLK | 0.08972 | 0.16530 | 0.67768 |
| | RN | 0.10502 | 0.15566 | 0.55926 |
| | RN | 0.12178 | 0.17262 | 0.57788 |
| | SN | 0.09520 | 0.15571 | 0.62174 |
| | SN | 0.07891 | 0.14051 | 0.60644 |

Internal switching power(pJ) to Q falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | 0.06770 | 0.11451 | 0.50899 |
| | CLK | 0.09222 | 0.13887 | 0.53172 |
| | RN | 0.11637 | 0.17244 | 0.59300 |
| | RN | 0.09957 | 0.15467 | 0.57629 |

Internal switching power(pJ) to QN rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | 0.06763 | 0.11443 | 0.50805 |
| | CLK | 0.09215 | 0.13878 | 0.53208 |
| | RN | 0.11635 | 0.17181 | 0.59143 |
| | RN | 0.09955 | 0.15509 | 0.57434 |

Internal switching power(pJ) to QN falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | 0.06458 | 0.13962 | 0.64790 |
| | CLK | 0.08963 | 0.16459 | 0.67511 |
| | RN | 0.10495 | 0.15575 | 0.55607 |
| | RN | 0.12171 | 0.17250 | 0.57349 |
| | SN | 0.09512 | 0.15609 | 0.61976 |
| | SN | 0.07882 | 0.13985 | 0.60374 |

Passive power(pJ) for D rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | -0.01322 | -0.01337 | -0.01335 |
| | CLK | 0.00655 | 0.00647 | 0.00649 |
| | (!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN) | 0.08460 | 0.15229 | 0.71637 |
| | (!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN) | 0.11017 | 0.17788 | 0.74184 |
| | (!CLK * RN * !SN * Q * !QN) | 0.03740 | 0.10128 | 0.62199 |
| | (!CLK * RN * !SN * Q * !QN) | 0.06908 | 0.13307 | 0.65351 |
| | (!CLK * !RN * SN * !Q * QN) | 0.03715 | 0.10059 | 0.62211 |
| | (!CLK * !RN * SN * !Q * QN) | 0.06896 | 0.13235 | 0.65366 |
| | (!CLK * !RN * !SN * !Q * QN) | 0.03740 | 0.10128 | 0.62199 |
| | (!CLK * !RN * !SN * !Q * QN) | 0.06908 | 0.13307 | 0.65351 |

Passive power(pJ) for D falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | CLK | 0.01350 | 0.01350 | 0.01335 |
| | CLK | -0.00644 | -0.00647 | -0.00648 |
| | (!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN) | 0.10616 | 0.17651 | 0.74263 |
| | (!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN) | 0.08055 | 0.15087 | 0.71713 |
| | (!CLK * RN * !SN * Q * !QN) | 0.04832 | 0.11362 | 0.63649 |
| | (!CLK * RN * !SN * Q * !QN) | 0.01674 | 0.08188 | 0.60486 |
| | (!CLK * !RN * SN * !Q * QN) | 0.04844 | 0.11347 | 0.63632 |
| | (!CLK * !RN * SN * !Q * QN) | 0.01680 | 0.08179 | 0.60475 |
| | (!CLK * !RN * !SN * !Q * QN) | 0.04832 | 0.11362 | 0.63650 |
| | (!CLK * !RN * !SN * !Q * QN) | 0.01674 | 0.08186 | 0.60486 |

Passive power(pJ) for RN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | (CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN) | 0.00945 | 0.09340 | 0.67565 |
| | (CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN) | 0.03159 | 0.11551 | 0.69779 |
| | (!CLK * D * SN * !Q * QN) | 0.05546 | 0.14345 | 0.75218 |
| | (!CLK * D * SN * !Q * QN) | 0.07230 | 0.16042 | 0.76910 |

Passive power(pJ) for RN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | $(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)$ | 0.03774 | 0.12507 | 0.70816 |
| | $(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)$ | 0.01557 | 0.10282 | 0.68608 |
| | $(!CLK * D * SN * !Q * QN)$ | 0.07901 | 0.17019 | 0.78403 |
| | $(!CLK * D * SN * !Q * QN)$ | 0.06214 | 0.15344 | 0.76718 |

Passive power(pJ) for SN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | $(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)$ | -0.02793 | -0.02816 | -0.02827 |
| | $(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)$ | 0.00386 | 0.00388 | 0.00366 |
| | $(!RN * !Q * QN)$ | -0.02694 | -0.02702 | -0.02698 |
| | $(!RN * !Q * QN)$ | 0.01311 | 0.01316 | 0.01302 |
| | $(!CLK * !D * RN * Q * !QN)$ | 0.02956 | 0.08801 | 0.55614 |
| | $(!CLK * !D * RN * Q * !QN)$ | 0.06710 | 0.12577 | 0.59362 |

Passive power(pJ) for SN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|--|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | $(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)$ | 0.02846 | 0.02860 | 0.02836 |
| | $(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)$ | -0.00361 | -0.00364 | -0.00359 |
| | $(!RN * !Q * QN)$ | 0.02707 | 0.02702 | 0.02698 |
| | $(!RN * !Q * QN)$ | -0.01298 | -0.01298 | -0.01298 |
| | $(!CLK * !D * RN * Q * !QN)$ | 0.06258 | 0.11848 | 0.58926 |
| | $(!CLK * !D * RN * Q * !QN)$ | 0.02492 | 0.08071 | 0.55161 |

Passive power(pJ) for CLK rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | $(D * RN * Q * !QN)$ | -0.00022 | 0.08422 | 0.66646 |
| | $(D * RN * Q * !QN)$ | 0.04664 | 0.13103 | 0.71314 |
| | $(D * !RN * SN * !Q * QN)$ | 0.03593 | 0.12442 | 0.73405 |
| | $(D * !RN * SN * !Q * QN)$ | 0.08031 | 0.16869 | 0.77671 |
| | $(D * !RN * !SN * !Q * QN)$ | 0.03580 | 0.12436 | 0.73378 |
| | $(D * !RN * !SN * !Q * QN)$ | 0.08025 | 0.16861 | 0.77637 |
| | $(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)$ | -0.00083 | 0.08455 | 0.66610 |
| | $(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)$ | 0.05312 | 0.13834 | 0.71997 |
| | $(!D * RN * !SN * Q * !QN)$ | 0.02509 | 0.16620 | 1.15806 |
| | $(!D * RN * !SN * Q * !QN)$ | 0.08159 | 0.22280 | 1.21437 |

Passive power(pJ) for CLK falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|--|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dffsr_1 | (D * RN * SN * !Q * QN) | 0.14915 | 0.23727 | 1.00237 |
| | (D * RN * SN * !Q * QN) | 0.10132 | 0.18958 | 0.95592 |
| | (D * RN * Q * !QN) | 0.04729 | 0.13513 | 0.71738 |
| | (D * RN * Q * !QN) | 0.00048 | 0.08852 | 0.67051 |
| | (D * !RN * SN * !Q * QN) | 0.09406 | 0.18881 | 0.79676 |
| | (D * !RN * SN * !Q * QN) | 0.04959 | 0.14470 | 0.75327 |
| | (D * !RN * !SN * !Q * QN) | 0.09424 | 0.18910 | 0.79678 |
| | (D * !RN * !SN * !Q * QN) | 0.04977 | 0.14491 | 0.75318 |
| | (!D * RN * SN * Q * !QN) | 0.13537 | 0.28452 | 1.17447 |
| | (!D * RN * SN * Q * !QN) | 0.08472 | 0.23384 | 1.12334 |
| | (!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN) | 0.05373 | 0.13922 | 0.72024 |
| | (!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN) | -0.00033 | 0.08498 | 0.66631 |
| | (!D * RN * !SN * Q * !QN) | 0.06924 | 0.21479 | 1.20685 |
| | (!D * RN * !SN * Q * !QN) | 0.01269 | 0.15837 | 1.15038 |

GF180MCU_OSU_SC_GP9T3V3__DFF_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT | |
|-------|-----|--------|-----|
| D | CLK | Q | QN |
| 0 | R | 0 | 1 |
| 1 | R | 1 | 0 |
| x | x | IQ | IQN |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__dff_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) | |
|--------------------------------|-------------|---------|-------------|---------|
| | D | CLK | Q | QN |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | 0.00393 | 0.01039 | 1.56141 | 1.56075 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | 0.00000 | 0.00595 | 0.00661 |

Delay Information

Delay(ns) to Q rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK->Q (RR) | 0.26942 | 1.25620 | 16.48390 |
| | QN->Q (FR) | 0.04498 | 0.85148 | 10.25460 |

Delay(ns) to Q falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK->Q (RF) | 0.35742 | 1.28545 | 16.29670 |
| | QN->Q (RF) | 0.03639 | 0.65226 | 8.74007 |

Delay(ns) to QN rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK->QN (RR) | 0.32250 | 0.75813 | 6.99720 |

Delay(ns) to QN falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK->QN (RF) | 0.23125 | 0.67320 | 6.16788 |

Constraint Information

Constraints(ns) for D rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|--------------------------------|--------------|----------------|-------------------------|----------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | hold | CLK (R) | -0.10101 | -0.09519 | 0.57241 |
| | setup | CLK (R) | 0.19078 | 0.25850 | 0.88708 |

Constraints(ns) for D falling :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|--------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | hold | CLK (R) | -0.20420 | -0.60089 | -4.76816 |
| | setup | CLK (R) | 0.22179 | 0.61438 | 5.15952 |

Constraints(ns) for CLK rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|--------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | min_pulse_width | CLK () | 0.15531 | 1.45630 | 16.50020 |
| | min_pulse_width | CLK () | 0.18900 | 1.45630 | 16.50020 |

Constraints(ns) for CLK falling (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|--------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | min_pulse_width | CLK () | 0.25379 | 1.45630 | 16.50020 |
| | min_pulse_width | CLK () | 0.18123 | 1.45630 | 16.50020 |

Power Information

Internal switching power(pJ) to Q rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | 0.04946 | 0.12984 | 0.64377 |
| | CLK | 0.07753 | 0.15803 | 0.67514 |

Internal switching power(pJ) to Q falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | 0.05842 | 0.10745 | 0.50368 |
| | CLK | 0.07991 | 0.12830 | 0.52377 |

Internal switching power(pJ) to QN rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | 0.05840 | 0.10719 | 0.50270 |
| | CLK | 0.07989 | 0.12852 | 0.52401 |

Internal switching power(pJ) to QN falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | 0.04937 | 0.12979 | 0.64122 |
| | CLK | 0.07744 | 0.15791 | 0.67139 |

Passive power(pJ) for D rising (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | -0.01322 | -0.01338 | -0.01335 |
| | CLK | 0.00655 | 0.00647 | 0.00649 |
| | $(!CLK * Q * !QN) + (!CLK * !Q * QN)$ | 0.05982 | 0.13524 | 0.71342 |
| | $(!CLK * Q * !QN) + (!CLK * !Q * QN)$ | 0.09138 | 0.16690 | 0.74479 |

Passive power(pJ) for D falling (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | CLK | 0.01350 | 0.01350 | 0.01335 |
| | CLK | -0.00644 | -0.00647 | -0.00648 |
| | $(!CLK * Q * !QN) + (!CLK * !Q * QN)$ | 0.09185 | 0.16885 | 0.74724 |
| | $(!CLK * Q * !QN) + (!CLK * !Q * QN)$ | 0.06027 | 0.13728 | 0.71567 |

Passive power(pJ) for CLK rising (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|------------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | $(D * Q * !QN)$ | -0.00022 | 0.08422 | 0.66646 |
| | $(D * Q * !QN)$ | 0.04664 | 0.13102 | 0.71314 |
| | $(!D * !Q * QN)$ | -0.00083 | 0.08453 | 0.66610 |
| | $(!D * !Q * QN)$ | 0.05312 | 0.13836 | 0.71997 |

Passive power(pJ) for CLK falling (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|----------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dff_1 | (D * Q * !QN) | 0.04730 | 0.13539 | 0.71738 |
| | (D * Q * !QN) | 0.00048 | 0.08841 | 0.67051 |
| | (D * !Q * QN) | 0.12427 | 0.21430 | 0.99209 |
| | (D * !Q * QN) | 0.08251 | 0.17233 | 0.94983 |
| | (!D * Q * !QN) | 0.12089 | 0.27488 | 1.16805 |
| | (!D * Q * !QN) | 0.06421 | 0.21785 | 1.11108 |
| | (!D * !Q * QN) | 0.05375 | 0.13922 | 0.72024 |
| | (!D * !Q * QN) | -0.00032 | 0.08498 | 0.66630 |

GF180MCU_OSU_SC_GP9T3V3__DLATN_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|------|--------|
| D | CLKN | Q |
| x | 0 | IQ |
| 0 | 1 | 0 |
| 1 | 1 | 1 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|----------------------------------|-------------|---------|-------------|
| | D | CLKN | Q |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | 0.00395 | 0.00812 | 1.56358 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | 0.00000 | 0.00418 | 0.00475 |

Delay Information

Delay(ns) to Q rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | CLKN->Q (RR) | 0.26321 | 0.74398 | 6.94335 |
| | D->Q (RR) | 0.29531 | 0.73056 | 6.96558 |

Delay(ns) to Q falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | CLKN->Q (RF) | 0.33278 | 0.70064 | 6.22097 |
| | D->Q (FF) | 0.32836 | 0.89642 | 7.70570 |

Constraint Information

Constraints(ns) for D rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | hold | CLKN (F) | -0.17417 | -0.36560 | -2.23157 |
| | setup | CLKN (F) | 0.18929 | 0.52757 | 6.82894 |

Constraints(ns) for D falling :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | hold | CLKN (F) | -0.15692 | -0.19037 | 0.12822 |
| | setup | CLKN (F) | 0.16945 | 0.19470 | -0.12937 |

Constraints(ns) for CLKN rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|----------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | min_pulse_width | CLKN () | 0.15531 | 1.45630 | 16.50020 |
| | min_pulse_width | CLKN () | 0.18123 | 1.45630 | 16.50020 |

Power Information

Internal switching power(pJ) to Q rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | CLKN | 0.09253 | 0.24889 | 1.13079 |
| | CLKN | 0.13707 | 0.29348 | 1.17570 |
| | D | 0.08989 | 0.16843 | 0.75443 |
| | D | 0.11759 | 0.19603 | 0.78214 |

Internal switching power(pJ) to Q falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | CLKN | 0.11208 | 0.20101 | 0.81578 |
| | CLKN | 0.13878 | 0.22776 | 0.84295 |
| | D | 0.12857 | 0.20696 | 0.79445 |
| | D | 0.10028 | 0.17900 | 0.76670 |

Passive power(pJ) for D rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | !CLKN | -0.01334 | -0.01350 | -0.01346 |
| | !CLKN | 0.00659 | 0.00649 | 0.00646 |

Passive power(pJ) for D falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | !CLKN | 0.01344 | 0.01354 | 0.01346 |
| | !CLKN | -0.00639 | -0.00649 | -0.00646 |

Passive power(pJ) for CLKN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | (D * Q) | -0.00054 | 0.08676 | 0.67099 |
| | (D * Q) | 0.03387 | 0.12148 | 0.70541 |
| | (!D * !Q) | -0.00068 | 0.08702 | 0.67094 |
| | (!D * !Q) | 0.03723 | 0.12494 | 0.70871 |

Passive power(pJ) for CLKN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlatn_1 | (D * Q) | 0.03505 | 0.12500 | 0.70878 |
| | (D * Q) | 0.00046 | 0.09045 | 0.67426 |
| | (!D * !Q) | 0.03797 | 0.12641 | 0.70996 |
| | (!D * !Q) | -0.00001 | 0.08839 | 0.67209 |

GF180MCU_OSU_SC_GP9T3V3__DLAT_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|-----|--------|
| D | CLK | Q |
| x | 0 | IQ |
| 0 | 1 | 0 |
| 1 | 1 | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---------------------------------|-------------|---------|-------------|
| | D | CLK | Q |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | 0.00395 | 0.00812 | 1.56358 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | 0.00000 | 0.00418 | 0.00475 |

Delay Information

Delay(ns) to Q rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | CLK->Q (RR) | 0.26321 | 0.74398 | 6.94335 |
| | D->Q (RR) | 0.29531 | 0.73056 | 6.96558 |

Delay(ns) to Q falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | CLK->Q (RF) | 0.33278 | 0.70064 | 6.22097 |
| | D->Q (FF) | 0.32836 | 0.89642 | 7.70570 |

Constraint Information

Constraints(ns) for D rising :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | hold | CLK (F) | -0.17417 | -0.36560 | -2.23157 |
| | setup | CLK (F) | 0.18929 | 0.52757 | 6.82894 |

Constraints(ns) for D falling :

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|--------------|----------------|-------------------------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | hold | CLK (F) | -0.15692 | -0.19037 | 0.12822 |
| | setup | CLK (F) | 0.16945 | 0.19470 | -0.12937 |

Constraints(ns) for CLK rising (conditional):

| Cell Name | Timing Check | Ref Pin(trans) | Reference Slew Rate(ns) | | |
|---------------------------------|-----------------|----------------|-------------------------|---------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | min_pulse_width | CLK () | 0.15531 | 1.45630 | 16.50020 |
| | min_pulse_width | CLK () | 0.18123 | 1.45630 | 16.50020 |

Power Information

Internal switching power(pJ) to Q rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | CLK | 0.09253 | 0.24889 | 1.13079 |
| | CLK | 0.13707 | 0.29348 | 1.17570 |
| | D | 0.08989 | 0.16843 | 0.75443 |
| | D | 0.11759 | 0.19603 | 0.78214 |

Internal switching power(pJ) to Q falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | CLK | 0.11208 | 0.20101 | 0.81578 |
| | CLK | 0.13878 | 0.22776 | 0.84295 |
| | D | 0.12857 | 0.20696 | 0.79445 |
| | D | 0.10028 | 0.17900 | 0.76670 |

Passive power(pJ) for D rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | !CLK | -0.01334 | -0.01350 | -0.01346 |
| | !CLK | 0.00659 | 0.00649 | 0.00646 |

Passive power(pJ) for D falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | !CLK | 0.01344 | 0.01354 | 0.01346 |
| | !CLK | -0.00639 | -0.00649 | -0.00646 |

Passive power(pJ) for CLK rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | (D * Q) | -0.00054 | 0.08676 | 0.67099 |
| | (D * Q) | 0.03387 | 0.12148 | 0.70541 |
| | (!D * !Q) | -0.00068 | 0.08702 | 0.67094 |
| | (!D * !Q) | 0.03723 | 0.12494 | 0.70871 |

Passive power(pJ) for CLK falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__dlat_1 | (D * Q) | 0.03505 | 0.12500 | 0.70878 |
| | (D * Q) | 0.00046 | 0.09045 | 0.67426 |
| | (!D * !Q) | 0.03797 | 0.12641 | 0.70996 |
| | (!D * !Q) | -0.00001 | 0.08839 | 0.67209 |

GF180MCU_OSU_SC_GP9T3V3__INV_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__inv_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|---------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | 0.06466 | 23.87903 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | 0.00000 | 0.01192 | 0.01439 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | A->Y (FR) | 0.03956 | 0.49677 | 9.96266 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | A->Y (RF) | 0.03092 | 0.29391 | 8.47767 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | A | 0.35769 | 1.48564 | 4.08772 |
| | A | 0.00871 | 1.13458 | 3.73679 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_16 | A | 0.00389 | 1.07024 | 3.39414 |
| | A | 0.35277 | 1.42158 | 3.74746 |

GF180MCU_OSU_SC_GP9T3V3__INV_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__inv_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | 0.00404 | 1.50748 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | 0.00000 | 0.00075 | 0.00090 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|----------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | A->Y (FR) | 0.04498 | 0.84197 | 10.02570 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | A->Y (RF) | 0.03639 | 0.64312 | 8.53517 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | A | 0.02226 | 0.07404 | 0.25366 |
| | A | 0.00038 | 0.05208 | 0.23179 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_1 | A | -0.00053 | 0.04771 | 0.21052 |
| | A | 0.02128 | 0.06976 | 0.23249 |

GF180MCU_OSU_SC_GP9T3V3__INV_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__inv_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | 0.00808 | 2.98498 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | 0.00000 | 0.00149 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | A->Y (FR) | 0.04172 | 0.72858 | 9.96233 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | A->Y (RF) | 0.03307 | 0.52906 | 8.47738 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | A | 0.04475 | 0.15897 | 0.51097 |
| | A | 0.00091 | 0.11480 | 0.46711 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_2 | A | -0.00109 | 0.10609 | 0.42288 |
| | A | 0.04270 | 0.15004 | 0.46704 |

GF180MCU_OSU_SC_GP9T3V3__INV_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__inv_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | 0.01616 | 5.97048 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | 0.00000 | 0.00298 | 0.00360 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | A->Y (FR) | 0.04000 | 0.63574 | 9.96289 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | A->Y (RF) | 0.03137 | 0.43650 | 8.47788 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | A | 0.08959 | 0.33578 | 1.02191 |
| | A | 0.00205 | 0.24768 | 0.93418 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_4 | A | -0.00200 | 0.23109 | 0.84572 |
| | A | 0.08550 | 0.31888 | 0.93405 |

GF180MCU_OSU_SC_GP9T3V3__INV_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 1 |
| 1 | 0 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__inv_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|--------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | 0.03232 | 11.94140 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | 0.00000 | 0.00596 | 0.00720 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | A->Y (FR) | 0.03912 | 0.55929 | 9.96313 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | A->Y (RF) | 0.03045 | 0.35837 | 8.47809 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | A | 0.17894 | 0.70851 | 2.04380 |
| | A | 0.00445 | 0.53241 | 1.86833 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__inv_8 | A | -0.00375 | 0.49690 | 1.69140 |
| | A | 0.17077 | 0.67287 | 1.86807 |

GF180MCU_OSU_SC_GP9T3V3__LSHIFDOWN

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| 0 | 0 |
| 1 | HiZ |

Footprint

| Cell Name | Area |
|------------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__lshifdown | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|------------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | 0.00404 | 1.86454 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|------------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | 0.00000 | 0.00098 | 0.00142 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | A->Y (RR) | 0.06895 | 0.14207 | 0.25494 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|------------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | A->Y (FF) | 0.09893 | 0.70859 | 8.81878 |

Power Information

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|------------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | A | 0.04918 | 0.13876 | 0.72690 |
| | A | 0.02721 | 0.11697 | 0.70521 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|------------------------------------|------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | !Y | 0.00460 | 0.09160 | 0.67577 |
| | !Y | 0.02640 | 0.11364 | 0.69770 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|------------------------------------|------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__lshifdown | !Y | 0.02928 | 0.11895 | 0.70365 |
| | !Y | 0.00730 | 0.09684 | 0.68168 |

GF180MCU_OSU_SC_GP9T3V3__LSHIFUP

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | OUTPUT |
|-------|--------|
| A | Y |
| x | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__lshifup | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | Max Cap(pf) |
|----------------------------------|-------------|-------------|
| | A | Y |
| gf180mcu_osu_sc_gp9t3v3__lshifup | 0.00728 | 0.08462 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__lshifup | 0.00000 | 0.00000 | 0.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__lshifup | A->Y (RR) | 0.05111 | 0.94139 | 6.56566 |
| | A->Y (FR) | 0.05111 | 0.94139 | 6.56566 |

Passive Power Information

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__lshifup | !Y | 0.04031 | 0.04062 | 0.03953 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__lshifup | Y | -0.01548 | -0.01544 | -0.01600 |
| | !Y | -0.02369 | -0.02395 | -0.02405 |

GF180MCU_OSU_SC_GP9T3V3__MUX2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|---|-----|--------|
| A | B | Sel | Y |
| 0 | 0 | x | 0 |
| 0 | 1 | 0 | 0 |
| x | 1 | 1 | 1 |
| 1 | x | 0 | 1 |
| 1 | 0 | 1 | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | B | Sel | Y |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | 0.24485 | 0.24485 | 0.00808 | 0.24039 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | 0.00000 | 0.00201 | 0.00207 |

Delay Information

Delay(ns) to Y rising (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|----------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | A->Y (RR) | - | 0.02333 | 0.10898 | 0.80157 |
| | B->Y (RR) | - | 0.02529 | 0.10981 | 0.80245 |
| | Sel->Y (RR) | (!A * B) | 0.07429 | 0.23298 | 0.84092 |
| | Sel->Y (FR) | (A * !B) | 0.05563 | 0.41382 | 2.58659 |

Delay(ns) to Y falling (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|----------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | A->Y (FF) | - | 0.02811 | 0.11506 | 0.84003 |
| | B->Y (FF) | - | 0.02571 | 0.11405 | 0.83896 |
| | Sel->Y (FF) | (!A * B) | 0.08564 | 0.41550 | 2.08689 |
| | Sel->Y (RF) | (A * !B) | 0.04719 | 0.24437 | 1.46441 |

Power Information

Internal switching power(pJ) to Y rising (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|----------|-----------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | A | - | -0.03048 | -0.03051 | -0.03049 |
| | A | - | 0.01297 | 0.01301 | 0.01300 |
| | B | - | -0.02387 | -0.02386 | -0.02388 |
| | B | - | 0.02376 | 0.02377 | 0.02378 |
| | Sel | (A * !B) | 0.01192 | 0.10175 | 0.68712 |
| | Sel | (A * !B) | 0.00927 | 0.09899 | 0.68458 |
| | Sel | (!A * B) | -0.01752 | 0.06847 | 0.65235 |
| | Sel | (!A * B) | 0.05188 | 0.13862 | 0.72483 |

Internal switching power(pJ) to Y falling (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|----------|-----------|----------|----------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | A | - | 0.03048 | 0.03051 | 0.03054 |
| | A | - | -0.01297 | -0.01301 | -0.01300 |
| | B | - | 0.02387 | 0.02389 | 0.02390 |
| | B | - | -0.02376 | -0.02377 | -0.02378 |
| | Sel | (A * !B) | 0.01619 | 0.10391 | 0.68925 |
| | Sel | (A * !B) | 0.01876 | 0.10709 | 0.69450 |
| | Sel | (!A * B) | 0.06024 | 0.14739 | 0.73129 |
| | Sel | (!A * B) | -0.00917 | 0.07800 | 0.66226 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | (B * Sel * Y) + (!B * Sel * !Y) | -0.00715 | -0.00717 | -0.00714 |
| | (B * Sel * Y) + (!B * Sel * !Y) | 0.00469 | 0.00472 | 0.00470 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-----------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | $(B * Sel * Y) + (!B * Sel * !Y)$ | 0.00720 | 0.00717 | 0.00714 |
| | $(B * Sel * Y) + (!B * Sel * !Y)$ | -0.00469 | -0.00472 | -0.00470 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | $(A * !Sel * Y) + (!A * !Sel * !Y)$ | -0.00843 | -0.00846 | -0.00842 |
| | $(A * !Sel * Y) + (!A * !Sel * !Y)$ | 0.00407 | 0.00409 | 0.00407 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|-------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | $(A * !Sel * Y) + (!A * !Sel * !Y)$ | 0.00843 | 0.00846 | 0.00842 |
| | $(A * !Sel * Y) + (!A * !Sel * !Y)$ | -0.00407 | -0.00409 | -0.00407 |

Passive power(pJ) for Sel rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|------------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | $(A * B * Y)$ | -0.00072 | 0.08697 | 0.67095 |
| | $(A * B * Y)$ | 0.03710 | 0.12490 | 0.70871 |
| | $(!A * !B * !Y)$ | -0.00068 | 0.08657 | 0.67087 |
| | $(!A * !B * !Y)$ | 0.03358 | 0.12111 | 0.70522 |

Passive power(pJ) for Sel falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__mux2_1 | (A * B * Y) | 0.03787 | 0.12605 | 0.70976 |
| | (A * B * Y) | -0.00007 | 0.08814 | 0.67191 |
| | (!A * !B * !Y) | 0.03459 | 0.12426 | 0.70857 |
| | (!A * !B * !Y) | 0.00021 | 0.08986 | 0.67424 |

GF180MCU_OSU_SC_GP9T3V3__NAND2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | x | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|----------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | 0.00404 | 0.00402 | 1.04725 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | 0.00000 | 0.00079 | 0.00118 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | A->Y (FR) | 0.05391 | 0.73458 | 7.95705 |
| | B->Y (FR) | 0.06585 | 0.76115 | 7.99777 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | A->Y (RF) | 0.06150 | 0.77694 | 9.03370 |
| | B->Y (RF) | 0.06617 | 0.63493 | 7.88183 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | A | 0.02371 | 0.06746 | 0.23835 |
| | A | 0.00059 | 0.04432 | 0.21361 |
| | B | 0.03513 | 0.08287 | 0.26647 |
| | B | 0.00703 | 0.05453 | 0.23683 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | A | 0.00588 | 0.04849 | 0.21421 |
| | A | 0.02905 | 0.07189 | 0.23791 |
| | B | 0.00459 | 0.04928 | 0.23854 |
| | B | 0.03280 | 0.07788 | 0.26777 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | (!B * Y) | -0.01402 | -0.01412 | -0.01414 |
| | (!B * Y) | 0.00188 | 0.00188 | 0.00178 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | (!B * Y) | 0.01426 | 0.01431 | 0.01418 |
| | (!B * Y) | -0.00177 | -0.00177 | -0.00175 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | (!A * Y) | -0.01352 | -0.01358 | -0.01352 |
| | (!A * Y) | 0.00650 | 0.00654 | 0.00648 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nand2_1 | (!A * Y) | 0.01367 | 0.01367 | 0.01355 |
| | (!A * Y) | -0.00639 | -0.00652 | -0.00647 |

GF180MCU_OSU_SC_GP9T3V3__NOR2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | 0 | 1 |
| x | 1 | 0 |
| 1 | x | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | 0.00398 | 0.00404 | 0.78121 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | 0.00000 | 0.00084 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | A->Y (FR) | 0.09194 | 0.83618 | 8.71519 |
| | B->Y (FR) | 0.07001 | 0.97901 | 9.85004 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | A->Y (RF) | 0.05934 | 0.50696 | 5.37174 |
| | B->Y (RF) | 0.04320 | 0.46109 | 5.29400 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | A | 0.03440 | 0.08071 | 0.32284 |
| | A | 0.00253 | 0.04853 | 0.29057 |
| | B | 0.02602 | 0.07081 | 0.26848 |
| | B | 0.00354 | 0.04821 | 0.24589 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | A | 0.01134 | 0.05559 | 0.25578 |
| | A | 0.04303 | 0.08747 | 0.29150 |
| | B | 0.00064 | 0.04168 | 0.21929 |
| | B | 0.02314 | 0.06435 | 0.24590 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | (B * !Y) | -0.01310 | -0.01344 | -0.01336 |
| | (B * !Y) | 0.00654 | 0.00659 | 0.00651 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | (B * !Y) | 0.01341 | 0.01344 | 0.01336 |
| | (B * !Y) | -0.00648 | -0.00652 | -0.00649 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | (A * !Y) | -0.00461 | -0.00456 | -0.00451 |
| | (A * !Y) | 0.00792 | 0.00785 | 0.00780 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__nor2_1 | (A * !Y) | 0.00488 | 0.00484 | 0.00460 |
| | (A * !Y) | -0.00756 | -0.00760 | -0.00780 |

GF180MCU_OSU_SC_GP9T3V3__OAI21_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|---|--------|
| A0 | A1 | B | Y |
| 0 | 0 | x | 1 |
| x | 1 | 0 | 1 |
| x | 1 | 1 | 0 |
| 1 | x | 0 | 1 |
| 1 | x | 1 | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|-------------|
| | A0 | A1 | B | Y |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | 0.00395 | 0.00402 | 0.00404 | 0.77902 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | 0.00000 | 0.00097 | 0.00152 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | A0->Y (FR) | 0.12840 | 0.85377 | 8.59381 |
| | A1->Y (FR) | 0.10356 | 0.99678 | 9.74633 |
| | B->Y (FR) | 0.05358 | 0.68184 | 6.75524 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | A0->Y (RF) | 0.10041 | 0.58269 | 6.13624 |
| | A1->Y (RF) | 0.07349 | 0.53463 | 6.04630 |
| | B->Y (RF) | 0.08984 | 0.73943 | 7.41956 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | A0 | 0.04753 | 0.08644 | 0.28834 |
| | A0 | 0.00947 | 0.04817 | 0.25008 |
| | A1 | 0.03846 | 0.07638 | 0.23966 |
| | A1 | 0.00976 | 0.04758 | 0.21166 |
| | B | 0.02356 | 0.07591 | 0.30431 |
| | B | 0.00040 | 0.05241 | 0.28053 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | A0 | 0.01748 | 0.05472 | 0.23887 |
| | A0 | 0.05552 | 0.09284 | 0.27682 |
| | A1 | 0.00577 | 0.04052 | 0.20627 |
| | A1 | 0.03445 | 0.06937 | 0.23499 |
| | B | 0.00617 | 0.05579 | 0.27437 |
| | B | 0.02930 | 0.07900 | 0.29751 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (A1 * B * !Y) | -0.01308 | -0.01344 | -0.01338 |
| | (A1 * B * !Y) | 0.00653 | 0.00659 | 0.00651 |
| | (A1 * !B * Y) | -0.01314 | -0.01344 | -0.01336 |
| | (A1 * !B * Y) | 0.00651 | 0.00659 | 0.00651 |
| | (!A1 * !B * Y) | -0.01352 | -0.01357 | -0.01352 |
| | (!A1 * !B * Y) | 0.00652 | 0.00648 | 0.00645 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (A1 * B * !Y) | 0.01351 | 0.01344 | 0.01338 |
| | (A1 * B * !Y) | -0.00648 | -0.00652 | -0.00649 |
| | (A1 * !B * Y) | 0.01349 | 0.01344 | 0.01336 |
| | (A1 * !B * Y) | -0.00650 | -0.00653 | -0.00649 |
| | (!A1 * !B * Y) | 0.01358 | 0.01366 | 0.01355 |
| | (!A1 * !B * Y) | -0.00637 | -0.00648 | -0.00645 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (A0 * B * !Y) | -0.00461 | -0.00456 | -0.00451 |
| | (A0 * B * !Y) | 0.00789 | 0.00785 | 0.00780 |
| | (!B * Y) | -0.01311 | -0.01342 | -0.01331 |
| | (!B * Y) | 0.00654 | 0.00652 | 0.00651 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (A0 * B * !Y) | 0.00488 | 0.00484 | 0.00460 |
| | (A0 * B * !Y) | -0.00752 | -0.00759 | -0.00780 |
| | (!B * Y) | 0.01331 | 0.01344 | 0.01331 |
| | (!B * Y) | -0.00650 | -0.00652 | -0.00649 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (!A0 * !A1 * Y) | -0.01396 | -0.01405 | -0.01413 |
| | (!A0 * !A1 * Y) | 0.00194 | 0.00194 | 0.00179 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai21_1 | (!A0 * !A1 * Y) | 0.01413 | 0.01430 | 0.01418 |
| | (!A0 * !A1 * Y) | -0.00174 | -0.00177 | -0.00175 |

GF180MCU_OSU_SC_GP9T3V3__OAI22_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|----|--------|
| A0 | A1 | Y |
| 0 | 0 | 1 |
| x | 1 | 0 |
| 1 | x | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|----------------------------------|-------------|---------|-------------|
| | A0 | A1 | Y |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | 0.00398 | 0.00404 | 0.74002 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | 0.00000 | 0.00145 | 0.00180 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | A0->Y (FR) | 0.14597 | 0.86374 | 8.36791 |
| | A1->Y (FR) | 0.12121 | 1.00853 | 9.50550 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | A0->Y (RF) | 0.17477 | 0.71890 | 7.27315 |
| | A1->Y (RF) | 0.13099 | 0.65830 | 7.15756 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | A0 | 0.05343 | 0.09465 | 0.32290 |
| | A0 | 0.02142 | 0.06238 | 0.28961 |
| | A1 | 0.04421 | 0.08494 | 0.26988 |
| | A1 | 0.02177 | 0.06233 | 0.24719 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | A0 | 2.47139 | 2.41090 | 1.73828 |
| | A0 | 2.50280 | 2.44232 | 1.76983 |
| | A1 | 2.45533 | 2.38805 | 1.69936 |
| | A1 | 2.47758 | 2.41041 | 1.72170 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | (A1 * !Y) | -0.01308 | -0.01345 | -0.01338 |
| | (A1 * !Y) | 0.00653 | 0.00659 | 0.00651 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | (A1 * !Y) | 0.01342 | 0.01345 | 0.01338 |
| | (A1 * !Y) | -0.00648 | -0.00652 | -0.00649 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | (A0 * !Y) | -0.00461 | -0.00456 | -0.00451 |
| | (A0 * !Y) | 0.00790 | 0.00785 | 0.00780 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai22_1 | (A0 * !Y) | 0.00487 | 0.00485 | 0.00460 |
| | (A0 * !Y) | -0.00750 | -0.00759 | -0.00780 |

GF180MCU_OSU_SC_GP9T3V3__OAI31_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | | OUTPUT |
|-------|----|----|---|--------|
| A0 | A1 | A2 | B | Y |
| 0 | 0 | 0 | x | 1 |
| 0 | x | 1 | 0 | 1 |
| 0 | x | 1 | 1 | 0 |
| x | 1 | x | 0 | 1 |
| x | 1 | x | 1 | 0 |
| 1 | x | x | 0 | 1 |
| 1 | x | x | 1 | 0 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|---------|-------------|
| | A0 | A1 | A2 | B | Y |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | 0.00395 | 0.00402 | 0.00395 | 0.00404 | 0.52736 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | 0.00000 | 0.00103 | 0.00216 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | A0->Y (FR) | 0.19501 | 1.03447 | 8.96826 |
| | A1->Y (FR) | 0.13793 | 1.11756 | 9.77263 |
| | A2->Y (FR) | 0.22160 | 0.94893 | 8.21896 |
| | B->Y (FR) | 0.05347 | 0.61238 | 5.45578 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | A0->Y (RF) | 0.10829 | 0.48084 | 4.34351 |
| | A1->Y (RF) | 0.07891 | 0.43324 | 4.25359 |
| | A2->Y (RF) | 0.11836 | 0.51714 | 4.44466 |
| | B->Y (RF) | 0.10307 | 0.68762 | 5.76240 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | A0 | 0.05132 | 0.08226 | 0.27359 |
| | A0 | 0.01280 | 0.04368 | 0.23486 |
| | A1 | 0.04210 | 0.07622 | 0.24306 |
| | A1 | 0.01295 | 0.04697 | 0.21392 |
| | A2 | 0.06079 | 0.09246 | 0.33351 |
| | A2 | 0.01280 | 0.04438 | 0.28543 |
| | B | 0.02351 | 0.08124 | 0.36876 |
| | B | 0.00035 | 0.05802 | 0.34435 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | A0 | 0.01898 | 0.04904 | 0.22780 |
| | A0 | 0.05749 | 0.08768 | 0.26747 |
| | A1 | 0.00610 | 0.03629 | 0.19824 |
| | A1 | 0.03541 | 0.06554 | 0.22852 |
| | A2 | 0.03002 | 0.06156 | 0.26133 |
| | A2 | 0.07745 | 0.10917 | 0.31025 |
| | B | 0.00626 | 0.06127 | 0.33656 |
| | B | 0.02939 | 0.08444 | 0.36027 |

Passive power(pJ) for A0 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | $(A1 * B * !Y) + (!A1 * A2 * B * !Y)$ | -0.00839 | -0.00849 | -0.00845 |
| | $(A1 * B * !Y) + (!A1 * A2 * B * !Y)$ | 0.00659 | 0.00653 | 0.00650 |
| | $(A1 * !B * Y)$ | -0.00961 | -0.00972 | -0.00964 |
| | $(A1 * !B * Y)$ | 0.00658 | 0.00654 | 0.00651 |
| | $(!A1 * !B * Y)$ | -0.01309 | -0.01339 | -0.01327 |
| | $(!A1 * !B * Y)$ | 0.00653 | 0.00655 | 0.00651 |

Passive power(pJ) for A0 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | $(A1 * B * !Y) + (!A1 * A2 * B * !Y)$ | 0.00839 | 0.00849 | 0.00845 |
| | $(A1 * B * !Y) + (!A1 * A2 * B * !Y)$ | -0.00645 | -0.00652 | -0.00649 |
| | $(A1 * !B * Y)$ | 0.00961 | 0.00972 | 0.00964 |
| | $(A1 * !B * Y)$ | -0.00646 | -0.00654 | -0.00649 |
| | $(!A1 * !B * Y)$ | 0.01324 | 0.01339 | 0.01327 |
| | $(!A1 * !B * Y)$ | -0.00648 | -0.00655 | -0.00649 |

Passive power(pJ) for A1 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | (A0 * B * !Y) | -0.00457 | -0.00456 | -0.00451 |
| | (A0 * B * !Y) | 0.00785 | 0.00785 | 0.00780 |
| | (A0 * !B * Y) | -0.01303 | -0.01342 | -0.01333 |
| | (A0 * !B * Y) | 0.00649 | 0.00652 | 0.00651 |
| | (!A0 * A2 * B * !Y) | -0.00454 | -0.00449 | -0.00442 |
| | (!A0 * A2 * B * !Y) | 0.00789 | 0.00785 | 0.00780 |
| | (!A0 * !B * Y) | -0.01207 | -0.01283 | -0.01279 |
| | (!A0 * !B * Y) | 0.00652 | 0.00650 | 0.00651 |

Passive power(pJ) for A1 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | (A0 * B * !Y) | 0.00487 | 0.00484 | 0.00460 |
| | (A0 * B * !Y) | -0.00751 | -0.00759 | -0.00780 |
| | (A0 * !B * Y) | 0.01327 | 0.01345 | 0.01333 |
| | (A0 * !B * Y) | -0.00646 | -0.00652 | -0.00649 |
| | (!A0 * A2 * B * !Y) | 0.00498 | 0.00494 | 0.00442 |
| | (!A0 * A2 * B * !Y) | -0.00698 | -0.00709 | -0.00775 |
| | (!A0 * !B * Y) | 0.01289 | 0.01283 | 0.01279 |
| | (!A0 * !B * Y) | -0.00648 | -0.00650 | -0.00649 |

Passive power(pJ) for A2 rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | $(A0 * A1 * B * !Y)$ | -0.01312 | -0.01344 | -0.01338 |
| | $(A0 * A1 * B * !Y)$ | 0.00649 | 0.00659 | 0.00651 |
| | $(A0 * !B * Y)$ | -0.01322 | -0.01347 | -0.01339 |
| | $(A0 * !B * Y)$ | 0.00657 | 0.00659 | 0.00651 |
| | $(A0 * !A1 * B * !Y) + (!A0 * A1 * B * !Y)$ | -0.01311 | -0.01344 | -0.01338 |
| | $(A0 * !A1 * B * !Y) + (!A0 * A1 * B * !Y)$ | 0.00649 | 0.00659 | 0.00651 |
| | $(!A0 * A1 * !B * Y)$ | -0.01254 | -0.01316 | -0.01302 |
| | $(!A0 * A1 * !B * Y)$ | 0.00659 | 0.00657 | 0.00651 |
| | $(!A0 * !A1 * !B * Y)$ | -0.01349 | -0.01357 | -0.01352 |
| | $(!A0 * !A1 * !B * Y)$ | 0.00645 | 0.00646 | 0.00644 |

Passive power(pJ) for A2 falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | $(A0 * A1 * B * !Y)$ | 0.01351 | 0.01344 | 0.01338 |
| | $(A0 * A1 * B * !Y)$ | -0.00649 | -0.00652 | -0.00649 |
| | $(A0 * !B * Y)$ | 0.01351 | 0.01349 | 0.01339 |
| | $(A0 * !B * Y)$ | -0.00649 | -0.00654 | -0.00649 |
| | $(A0 * !A1 * B * !Y) + (!A0 * A1 * B * !Y)$ | 0.01350 | 0.01344 | 0.01338 |
| | $(A0 * !A1 * B * !Y) + (!A0 * A1 * B * !Y)$ | -0.00649 | -0.00652 | -0.00649 |
| | $(!A0 * A1 * !B * Y)$ | 0.01302 | 0.01316 | 0.01302 |
| | $(!A0 * A1 * !B * Y)$ | -0.00650 | -0.00653 | -0.00649 |
| | $(!A0 * !A1 * !B * Y)$ | 0.01355 | 0.01360 | 0.01355 |
| | $(!A0 * !A1 * !B * Y)$ | -0.00636 | -0.00646 | -0.00644 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | (!A0 * !A1 * !A2 * Y) | -0.01389 | -0.01398 | -0.01412 |
| | (!A0 * !A1 * !A2 * Y) | 0.00200 | 0.00200 | 0.00180 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__oai31_1 | (!A0 * !A1 * !A2 * Y) | 0.01413 | 0.01430 | 0.01418 |
| | (!A0 * !A1 * !A2 * Y) | -0.00174 | -0.00177 | -0.00175 |

GF180MCU_OSU_SC_GP9T3V3__OR2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | 0 | 0 |
| x | 1 | 1 |
| 1 | x | 1 |

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__or2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|--------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | 0.00404 | 0.00398 | 1.55634 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | 0.00000 | 0.00166 | 0.00239 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | A->Y (RR) | 0.09111 | 0.44583 | 6.27342 |
| | B->Y (RR) | 0.10926 | 0.54557 | 6.87422 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|--------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | A->Y (FF) | 0.13197 | 0.83526 | 8.44438 |
| | B->Y (FF) | 0.15549 | 0.76444 | 7.98435 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | A | 0.02158 | 0.08977 | 0.55597 |
| | A | 0.04409 | 0.11227 | 0.57669 |
| | B | 0.03263 | 0.10988 | 0.66201 |
| | B | 0.06449 | 0.14162 | 0.69352 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|--------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | A | 0.04804 | 0.11729 | 0.57924 |
| | A | 0.02543 | 0.09489 | 0.55677 |
| | B | 0.05681 | 0.13034 | 0.68094 |
| | B | 0.02480 | 0.09841 | 0.64951 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | (B * Y) | -0.00462 | -0.00456 | -0.00451 |
| | (B * Y) | 0.00789 | 0.00785 | 0.00780 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | (B * Y) | 0.00488 | 0.00485 | 0.00460 |
| | (B * Y) | -0.00753 | -0.00759 | -0.00780 |

Passive power(pJ) for B rising (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | (A * Y) | -0.01308 | -0.01345 | -0.01338 |
| | (A * Y) | 0.00653 | 0.00659 | 0.00651 |

Passive power(pJ) for B falling (conditional):

| Cell Name | When | Power(pJ) | | |
|--------------------------------|---------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__or2_1 | (A * Y) | 0.01349 | 0.01345 | 0.01338 |
| | (A * Y) | -0.00649 | -0.00652 | -0.00649 |

GF180MCU_OSU_SC_GP9T3V3__TBUF_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | 0.00395 | 0.00132 | 0.00272 | 24.97480 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | 0.00000 | 1583270.00000 | 4460640.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | A->Y (RR) | 0.55361 | 0.92033 | 8.11300 |
| | EN->Y (RR) | 0.53575 | 0.93744 | 6.16560 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|----------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | A->Y (FF) | 0.68314 | 1.17977 | 8.94805 |
| | EN_BAR->Y (FF) | 0.65180 | 1.18358 | 6.77083 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | A | 1.10049 | 0.87371 | 1.14055 |
| | A | 1.13674 | 0.90772 | 1.16769 |
| | EN | 1.10914 | 0.93883 | 0.74067 |
| | EN | 1.12681 | 0.95510 | 0.72587 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|----------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | A | 1.34740 | 1.04732 | 1.16581 |
| | A | 1.31113 | 1.00988 | 1.12983 |
| | EN_BAR | 1.33599 | 1.12754 | 0.74701 |
| | EN_BAR | 1.31557 | 1.10563 | 0.74109 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (EN * EN_BAR * Y) | -0.01422 | -0.01411 | -0.01365 |
| | (EN * EN_BAR * Y) | 0.00541 | 0.00542 | 0.00536 |
| | (!EN * EN_BAR) | -0.01321 | -0.01340 | -0.01335 |
| | (!EN * EN_BAR) | 0.00653 | 0.00646 | 0.00646 |
| | (!EN * !EN_BAR * !Y) | -0.01121 | -0.01181 | -0.01171 |
| | (!EN * !EN_BAR * !Y) | 0.00862 | 0.00750 | 0.00702 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (EN * EN_BAR * Y) | 0.01498 | 0.01411 | 0.01365 |
| | (EN * EN_BAR * Y) | -0.00494 | -0.00542 | -0.00536 |
| | (!EN * EN_BAR) | 0.01350 | 0.01350 | 0.01335 |
| | (!EN * EN_BAR) | -0.00639 | -0.00646 | -0.00646 |
| | (!EN * !EN_BAR * !Y) | 0.01184 | 0.01181 | 0.01171 |
| | (!EN * !EN_BAR * !Y) | -0.00804 | -0.00750 | -0.00702 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (EN_BAR * Y) | -0.00210 | -0.00089 | -0.00035 |
| | (EN_BAR * Y) | 0.00442 | 0.00446 | 0.00441 |
| | (A * !EN_BAR * Y) | -0.00210 | -0.00089 | -0.00035 |
| | (A * !EN_BAR * Y) | 0.00442 | 0.00445 | 0.00441 |
| | (!A * EN_BAR * !Y) | -0.00022 | -0.00022 | -0.00027 |
| | (!A * EN_BAR * !Y) | 0.00217 | 0.00216 | 0.00212 |
| | (!A * !EN_BAR * !Y) | -0.00050 | -0.00050 | -0.00061 |
| | (!A * !EN_BAR * !Y) | 0.00190 | 0.00188 | 0.00178 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (EN_BAR * Y) | 0.00296 | 0.00089 | 0.00035 |
| | (EN_BAR * Y) | -0.00354 | -0.00446 | -0.00441 |
| | (A * !EN_BAR * Y) | 0.00296 | 0.00089 | 0.00035 |
| | (A * !EN_BAR * Y) | -0.00354 | -0.00445 | -0.00441 |
| | (!A * EN_BAR * !Y) | 0.00029 | 0.00028 | 0.00028 |
| | (!A * EN_BAR * !Y) | -0.00213 | -0.00210 | -0.00209 |
| | (!A * !EN_BAR * !Y) | 0.00064 | 0.00063 | 0.00063 |
| | (!A * !EN_BAR * !Y) | -0.00179 | -0.00176 | -0.00174 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (A * EN * Y) | -0.00458 | -0.00454 | -0.00451 |
| | (A * EN * Y) | 0.00130 | 0.00129 | 0.00129 |
| | (A * !EN * Y) | -0.00566 | -0.00561 | -0.00558 |
| | (A * !EN * Y) | 0.00021 | 0.00021 | 0.00021 |
| | (!EN * !Y) | -0.00712 | -0.00715 | -0.00708 |
| | (!EN * !Y) | 0.00542 | 0.00598 | 0.00613 |
| | (!A * EN * !Y) | -0.00946 | -0.01029 | -0.01018 |
| | (!A * EN * !Y) | 0.00396 | 0.00156 | 0.00066 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_16 | (A * EN * Y) | 0.00491 | 0.00484 | 0.00460 |
| | (A * EN * Y) | -0.00100 | -0.00102 | -0.00129 |
| | (A * !EN * Y) | 0.00574 | 0.00570 | 0.00570 |
| | (A * !EN * Y) | -0.00016 | -0.00016 | -0.00020 |
| | (!EN * !Y) | 0.00712 | 0.00715 | 0.00708 |
| | (!EN * !Y) | -0.00542 | -0.00571 | -0.00565 |
| | (!A * EN * !Y) | 0.01022 | 0.01029 | 0.01018 |
| | (!A * EN * !Y) | -0.00333 | -0.00156 | -0.00066 |

GF180MCU_OSU_SC_GP9T3V3__TBUF_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | 0.00395 | 0.00132 | 0.00275 | 1.55772 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|-------------|--------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | 0.00000 | 98954.60000 | 278790.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | A->Y (RR) | 0.14941 | 0.59417 | 7.13501 |
| | EN->Y (RR) | 0.13255 | 0.34109 | 3.79007 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | A->Y (FF) | 0.17413 | 0.77127 | 7.90358 |
| | EN_BAR->Y (FF) | 0.14475 | 0.44159 | 3.85679 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | A | 0.03337 | 0.10287 | 0.63002 |
| | A | 0.06966 | 0.13902 | 0.66557 |
| | EN | 0.04295 | 0.04598 | 0.04694 |
| | EN | 0.06065 | 0.06360 | 0.06390 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | A | 0.06562 | 0.13353 | 0.66068 |
| | A | 0.02920 | 0.09722 | 0.62505 |
| | EN_BAR | 0.05508 | 0.05796 | 0.05791 |
| | EN_BAR | 0.03456 | 0.03753 | 0.03753 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (EN * EN_BAR * Y) | -0.01343 | -0.01360 | -0.01348 |
| | (EN * EN_BAR * Y) | 0.00616 | 0.00610 | 0.00610 |
| | (!EN * EN_BAR) | -0.01321 | -0.01341 | -0.01335 |
| | (!EN * EN_BAR) | 0.00653 | 0.00646 | 0.00646 |
| | (!EN * !EN_BAR * !Y) | -0.01202 | -0.01283 | -0.01270 |
| | (!EN * !EN_BAR * !Y) | 0.00717 | 0.00670 | 0.00660 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (EN * EN_BAR * Y) | 0.01405 | 0.01360 | 0.01348 |
| | (EN * EN_BAR * Y) | -0.00572 | -0.00610 | -0.00610 |
| | (!EN * EN_BAR) | 0.01350 | 0.01350 | 0.01335 |
| | (!EN * EN_BAR) | -0.00639 | -0.00646 | -0.00646 |
| | (!EN * !EN_BAR * !Y) | 0.01281 | 0.01283 | 0.01270 |
| | (!EN * !EN_BAR * !Y) | -0.00675 | -0.00670 | -0.00660 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (EN_BAR * Y) | -0.00044 | -0.00022 | -0.00015 |
| | (EN_BAR * Y) | 0.00612 | 0.00614 | 0.00608 |
| | (A * !EN_BAR * Y) | -0.00044 | -0.00022 | -0.00015 |
| | (A * !EN_BAR * Y) | 0.00612 | 0.00614 | 0.00607 |
| | (!A * EN_BAR * !Y) | -0.00027 | -0.00027 | -0.00031 |
| | (!A * EN_BAR * !Y) | 0.00214 | 0.00212 | 0.00208 |
| | (!A * !EN_BAR * !Y) | -0.00050 | -0.00051 | -0.00061 |
| | (!A * !EN_BAR * !Y) | 0.00189 | 0.00187 | 0.00178 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (EN_BAR * Y) | 0.00107 | 0.00022 | 0.00015 |
| | (EN_BAR * Y) | -0.00531 | -0.00614 | -0.00608 |
| | (A * !EN_BAR * Y) | 0.00106 | 0.00022 | 0.00015 |
| | (A * !EN_BAR * Y) | -0.00530 | -0.00614 | -0.00607 |
| | (!A * EN_BAR * !Y) | 0.00033 | 0.00033 | 0.00033 |
| | (!A * EN_BAR * !Y) | -0.00205 | -0.00202 | -0.00200 |
| | (!A * !EN_BAR * !Y) | 0.00063 | 0.00063 | 0.00063 |
| | (!A * !EN_BAR * !Y) | -0.00179 | -0.00176 | -0.00175 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (A * EN * Y) | -0.00452 | -0.00454 | -0.00451 |
| | (A * EN * Y) | 0.00128 | 0.00129 | 0.00129 |
| | (A * !EN * Y) | -0.00547 | -0.00542 | -0.00539 |
| | (A * !EN * Y) | 0.00033 | 0.00032 | 0.00032 |
| | (!EN * !Y) | -0.00932 | -0.00926 | -0.00842 |
| | (!EN * !Y) | 0.00238 | 0.00239 | 0.00252 |
| | (!A * EN * !Y) | -0.01183 | -0.01272 | -0.01265 |
| | (!A * EN * !Y) | 0.00140 | 0.00045 | 0.00027 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_1 | (A * EN * Y) | 0.00489 | 0.00483 | 0.00460 |
| | (A * EN * Y) | -0.00101 | -0.00103 | -0.00129 |
| | (A * !EN * Y) | 0.00729 | 0.00798 | 0.01307 |
| | (A * !EN * Y) | 0.00141 | 0.00215 | 0.00721 |
| | (!EN * !Y) | 0.01253 | 0.01194 | 0.00842 |
| | (!EN * !Y) | 0.00194 | 0.00146 | -0.00199 |
| | (!A * EN * !Y) | 0.01274 | 0.01272 | 0.01265 |
| | (!A * EN * !Y) | -0.00078 | -0.00045 | -0.00027 |

GF180MCU_OSU_SC_GP9T3V3__TBUF_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | 0.00395 | 0.00133 | 0.00273 | 3.10304 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|--------------|--------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | 0.00000 | 197909.00000 | 557580.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | A->Y (RR) | 0.17631 | 0.55897 | 7.18623 |
| | EN->Y (RR) | 0.15922 | 0.34684 | 4.02272 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | A->Y (FF) | 0.20650 | 0.74722 | 7.96694 |
| | EN_BAR->Y (FF) | 0.17653 | 0.48072 | 4.17012 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | A | 0.06111 | 0.12783 | 0.65344 |
| | A | 0.09740 | 0.16397 | 0.68834 |
| | EN | 0.07059 | 0.07710 | 0.08152 |
| | EN | 0.08828 | 0.09466 | 0.09397 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | A | 0.09545 | 0.15983 | 0.68290 |
| | A | 0.05905 | 0.12372 | 0.64778 |
| | EN_BAR | 0.08458 | 0.09073 | 0.08654 |
| | EN_BAR | 0.06406 | 0.07037 | 0.06614 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (EN * EN_BAR * Y) | -0.01352 | -0.01366 | -0.01350 |
| | (EN * EN_BAR * Y) | 0.00606 | 0.00608 | 0.00601 |
| | (!EN * EN_BAR) | -0.01321 | -0.01341 | -0.01335 |
| | (!EN * EN_BAR) | 0.00653 | 0.00646 | 0.00646 |
| | (!EN * !EN_BAR * !Y) | -0.01185 | -0.01265 | -0.01253 |
| | (!EN * !EN_BAR * !Y) | 0.00748 | 0.00685 | 0.00667 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (EN * EN_BAR * Y) | 0.01427 | 0.01366 | 0.01350 |
| | (EN * EN_BAR * Y) | -0.00553 | -0.00608 | -0.00601 |
| | (!EN * EN_BAR) | 0.01350 | 0.01350 | 0.01335 |
| | (!EN * EN_BAR) | -0.00639 | -0.00646 | -0.00646 |
| | (!EN * !EN_BAR * !Y) | 0.01264 | 0.01265 | 0.01253 |
| | (!EN * !EN_BAR * !Y) | -0.00696 | -0.00685 | -0.00667 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (EN_BAR * Y) | -0.00081 | -0.00028 | -0.00018 |
| | (EN_BAR * Y) | 0.00570 | 0.00570 | 0.00568 |
| | (A * !EN_BAR * Y) | -0.00081 | -0.00028 | -0.00018 |
| | (A * !EN_BAR * Y) | 0.00570 | 0.00570 | 0.00568 |
| | (!A * EN_BAR * !Y) | -0.00025 | -0.00025 | -0.00030 |
| | (!A * EN_BAR * !Y) | 0.00215 | 0.00213 | 0.00209 |
| | (!A * !EN_BAR * !Y) | -0.00050 | -0.00051 | -0.00061 |
| | (!A * !EN_BAR * !Y) | 0.00189 | 0.00188 | 0.00178 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (EN_BAR * Y) | 0.00143 | 0.00028 | 0.00018 |
| | (EN_BAR * Y) | -0.00497 | -0.00570 | -0.00568 |
| | (A * !EN_BAR * Y) | 0.00143 | 0.00028 | 0.00018 |
| | (A * !EN_BAR * Y) | -0.00496 | -0.00570 | -0.00568 |
| | (!A * EN_BAR * !Y) | 0.00031 | 0.00031 | 0.00031 |
| | (!A * EN_BAR * !Y) | -0.00208 | -0.00205 | -0.00204 |
| | (!A * !EN_BAR * !Y) | 0.00063 | 0.00063 | 0.00063 |
| | (!A * !EN_BAR * !Y) | -0.00179 | -0.00176 | -0.00175 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (A * EN * Y) | -0.00459 | -0.00454 | -0.00451 |
| | (A * EN * Y) | 0.00129 | 0.00129 | 0.00129 |
| | (A * !EN * Y) | -0.00555 | -0.00550 | -0.00547 |
| | (A * !EN * Y) | 0.00028 | 0.00028 | 0.00027 |
| | (!EN * !Y) | -0.00830 | -0.00831 | -0.00784 |
| | (!EN * !Y) | 0.00326 | 0.00327 | 0.00345 |
| | (!A * EN * !Y) | -0.01118 | -0.01252 | -0.01239 |
| | (!A * EN * !Y) | 0.00209 | 0.00057 | 0.00034 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_2 | (A * EN * Y) | 0.00490 | 0.00483 | 0.00460 |
| | (A * EN * Y) | -0.00100 | -0.00103 | -0.00129 |
| | (A * !EN * Y) | 0.00572 | 0.00568 | 0.00574 |
| | (A * !EN * Y) | -0.00017 | -0.00016 | -0.00015 |
| | (!EN * !Y) | 0.00830 | 0.00831 | 0.00784 |
| | (!EN * !Y) | -0.00267 | -0.00277 | -0.00313 |
| | (!A * EN * !Y) | 0.01241 | 0.01252 | 0.01239 |
| | (!A * EN * !Y) | -0.00107 | -0.00057 | -0.00034 |

GF180MCU_OSU_SC_GP9T3V3__TBUF_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | 0.00395 | 0.00132 | 0.00274 | 6.20353 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|--------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | 0.00000 | 395818.00000 | 1115160.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | A->Y (RR) | 0.23196 | 0.58712 | 7.34413 |
| | EN->Y (RR) | 0.21450 | 0.43768 | 4.45232 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | A->Y (FF) | 0.27479 | 0.78961 | 8.13518 |
| | EN_BAR->Y (FF) | 0.24431 | 0.60733 | 4.71424 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | A | 0.13426 | 0.19068 | 0.70528 |
| | A | 0.17051 | 0.22686 | 0.73841 |
| | EN | 0.14350 | 0.15373 | 0.14906 |
| | EN | 0.16118 | 0.17124 | 0.16006 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | A | 0.17777 | 0.22302 | 0.73095 |
| | A | 0.14144 | 0.18673 | 0.69586 |
| | EN_BAR | 0.16673 | 0.17154 | 0.15544 |
| | EN_BAR | 0.14627 | 0.15125 | 0.13812 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (EN * EN_BAR * Y) | -0.01371 | -0.01379 | -0.01352 |
| | (EN * EN_BAR * Y) | 0.00587 | 0.00589 | 0.00582 |
| | (!EN * EN_BAR) | -0.01321 | -0.01340 | -0.01335 |
| | (!EN * EN_BAR) | 0.00653 | 0.00646 | 0.00646 |
| | (!EN * !EN_BAR * !Y) | -0.01162 | -0.01242 | -0.01231 |
| | (!EN * !EN_BAR * !Y) | 0.00788 | 0.00701 | 0.00678 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (EN * EN_BAR * Y) | 0.01450 | 0.01379 | 0.01352 |
| | (EN * EN_BAR * Y) | -0.00532 | -0.00589 | -0.00582 |
| | (!EN * EN_BAR) | 0.01350 | 0.01350 | 0.01335 |
| | (!EN * EN_BAR) | -0.00639 | -0.00646 | -0.00646 |
| | (!EN * !EN_BAR * !Y) | 0.01242 | 0.01242 | 0.01231 |
| | (!EN * !EN_BAR * !Y) | -0.00726 | -0.00701 | -0.00678 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (EN_BAR * Y) | -0.00109 | -0.00040 | -0.00022 |
| | (EN_BAR * Y) | 0.00541 | 0.00542 | 0.00540 |
| | (A * !EN_BAR * Y) | -0.00109 | -0.00040 | -0.00022 |
| | (A * !EN_BAR * Y) | 0.00541 | 0.00542 | 0.00540 |
| | (!A * EN_BAR * !Y) | -0.00024 | -0.00024 | -0.00029 |
| | (!A * EN_BAR * !Y) | 0.00216 | 0.00215 | 0.00210 |
| | (!A * !EN_BAR * !Y) | -0.00050 | -0.00051 | -0.00061 |
| | (!A * !EN_BAR * !Y) | 0.00190 | 0.00188 | 0.00178 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (EN_BAR * Y) | 0.00199 | 0.00040 | 0.00022 |
| | (EN_BAR * Y) | -0.00447 | -0.00542 | -0.00540 |
| | (A * !EN_BAR * Y) | 0.00199 | 0.00040 | 0.00022 |
| | (A * !EN_BAR * Y) | -0.00447 | -0.00542 | -0.00540 |
| | (!A * EN_BAR * !Y) | 0.00030 | 0.00030 | 0.00030 |
| | (!A * EN_BAR * !Y) | -0.00211 | -0.00208 | -0.00206 |
| | (!A * !EN_BAR * !Y) | 0.00063 | 0.00063 | 0.00063 |
| | (!A * !EN_BAR * !Y) | -0.00179 | -0.00176 | -0.00174 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (A * EN * Y) | -0.00459 | -0.00454 | -0.00451 |
| | (A * EN * Y) | 0.00129 | 0.00129 | 0.00129 |
| | (A * !EN * Y) | -0.00560 | -0.00556 | -0.00552 |
| | (A * !EN * Y) | 0.00024 | 0.00024 | 0.00024 |
| | (!EN * !Y) | -0.00758 | -0.00756 | -0.00757 |
| | (!EN * !Y) | 0.00443 | 0.00462 | 0.00462 |
| | (!A * EN * !Y) | -0.01068 | -0.01173 | -0.01175 |
| | (!A * EN * !Y) | 0.00284 | 0.00073 | 0.00042 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_4 | (A * EN * Y) | 0.00490 | 0.00483 | 0.00460 |
| | (A * EN * Y) | -0.00100 | -0.00103 | -0.00129 |
| | (A * !EN * Y) | 0.00571 | 0.00567 | 0.00566 |
| | (A * !EN * Y) | -0.00019 | -0.00019 | -0.00023 |
| | (!EN * !Y) | 0.00758 | 0.00756 | 0.00757 |
| | (!EN * !Y) | -0.00402 | -0.00402 | -0.00405 |
| | (!A * EN * !Y) | 0.01176 | 0.01173 | 0.01175 |
| | (!A * EN * !Y) | -0.00172 | -0.00073 | -0.00042 |

GF180MCU_OSU_SC_GP9T3V3__TBUF_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | 0.00395 | 0.00132 | 0.00273 | 12.46914 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|--------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | 0.00000 | 791637.00000 | 2230320.00000 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | A->Y (RR) | 0.34085 | 0.69793 | 7.64557 |
| | EN->Y (RR) | 0.32306 | 0.62597 | 5.16901 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | A->Y (FF) | 0.41186 | 0.91656 | 8.44678 |
| | EN_BAR->Y (FF) | 0.38077 | 0.83239 | 5.56958 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | A | 0.35506 | 0.35802 | 0.83000 |
| | A | 0.39132 | 0.39419 | 0.85406 |
| | EN | 0.36387 | 0.35442 | 0.29115 |
| | EN | 0.38154 | 0.37189 | 0.30878 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | A | 0.43817 | 0.40355 | 0.84749 |
| | A | 0.40185 | 0.36731 | 0.81181 |
| | EN_BAR | 0.42685 | 0.40337 | 0.31594 |
| | EN_BAR | 0.40641 | 0.38384 | 0.29555 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (EN * EN_BAR * Y) | -0.01395 | -0.01394 | -0.01359 |
| | (EN * EN_BAR * Y) | 0.00566 | 0.00568 | 0.00561 |
| | (!EN * EN_BAR) | -0.01321 | -0.01340 | -0.01335 |
| | (!EN * EN_BAR) | 0.00653 | 0.00646 | 0.00646 |
| | (!EN * !EN_BAR * !Y) | -0.01140 | -0.01211 | -0.01200 |
| | (!EN * !EN_BAR * !Y) | 0.00829 | 0.00719 | 0.00689 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (EN * EN_BAR * Y) | 0.01478 | 0.01394 | 0.01359 |
| | (EN * EN_BAR * Y) | -0.00510 | -0.00568 | -0.00561 |
| | (!EN * EN_BAR) | 0.01350 | 0.01350 | 0.01335 |
| | (!EN * EN_BAR) | -0.00639 | -0.00646 | -0.00646 |
| | (!EN * !EN_BAR * !Y) | 0.01212 | 0.01211 | 0.01200 |
| | (!EN * !EN_BAR * !Y) | -0.00765 | -0.00719 | -0.00689 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (EN_BAR * Y) | -0.00146 | -0.00059 | -0.00027 |
| | (EN_BAR * Y) | 0.00505 | 0.00509 | 0.00504 |
| | (A * !EN_BAR * Y) | -0.00146 | -0.00059 | -0.00027 |
| | (A * !EN_BAR * Y) | 0.00505 | 0.00509 | 0.00504 |
| | (!A * EN_BAR * !Y) | -0.00023 | -0.00023 | -0.00028 |
| | (!A * EN_BAR * !Y) | 0.00217 | 0.00216 | 0.00211 |
| | (!A * !EN_BAR * !Y) | -0.00050 | -0.00051 | -0.00061 |
| | (!A * !EN_BAR * !Y) | 0.00190 | 0.00188 | 0.00178 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (EN_BAR * Y) | 0.00254 | 0.00059 | 0.00027 |
| | (EN_BAR * Y) | -0.00395 | -0.00509 | -0.00504 |
| | (A * !EN_BAR * Y) | 0.00253 | 0.00059 | 0.00027 |
| | (A * !EN_BAR * Y) | -0.00394 | -0.00509 | -0.00504 |
| | (!A * EN_BAR * !Y) | 0.00029 | 0.00029 | 0.00029 |
| | (!A * EN_BAR * !Y) | -0.00213 | -0.00209 | -0.00208 |
| | (!A * !EN_BAR * !Y) | 0.00063 | 0.00063 | 0.00063 |
| | (!A * !EN_BAR * !Y) | -0.00179 | -0.00176 | -0.00174 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (A * EN * Y) | -0.00458 | -0.00454 | -0.00451 |
| | (A * EN * Y) | 0.00129 | 0.00129 | 0.00129 |
| | (A * !EN * Y) | -0.00564 | -0.00559 | -0.00556 |
| | (A * !EN * Y) | 0.00022 | 0.00022 | 0.00022 |
| | (!EN * !Y) | -0.00735 | -0.00732 | -0.00732 |
| | (!EN * !Y) | 0.00505 | 0.00543 | 0.00554 |
| | (!A * EN * !Y) | -0.00989 | -0.01106 | -0.01108 |
| | (!A * EN * !Y) | 0.00348 | 0.00107 | 0.00052 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|----------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tbuf_8 | (A * EN * Y) | 0.00491 | 0.00484 | 0.00460 |
| | (A * EN * Y) | -0.00100 | -0.00102 | -0.00129 |
| | (A * !EN * Y) | 0.00573 | 0.00568 | 0.00569 |
| | (A * !EN * Y) | -0.00017 | -0.00017 | -0.00021 |
| | (!EN * !Y) | 0.00735 | 0.00732 | 0.00732 |
| | (!EN * !Y) | -0.00491 | -0.00490 | -0.00492 |
| | (!A * EN * !Y) | 0.01111 | 0.01106 | 0.01108 |
| | (!A * EN * !Y) | -0.00241 | -0.00107 | -0.00052 |

GF180MCU_OSU_SC_GP9T3V3__TIEHI

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tiehi | 0.00000 |

Pin Capacitance Information

| Cell Name | Max Cap(pf) |
|--------------------------------|-------------|
| | Y |
| gf180mcu_osu_sc_gp9t3v3__tiehi | 3.44214 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tiehi | 0.00000 | 0.00000 | 0.00000 |

GF180MCU_OSU_SC_GP9T3V3__TIELO

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Footprint

| Cell Name | Area |
|--------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tielo | 0.00000 |

Pin Capacitance Information

| Cell Name | Max Cap(pf) |
|--------------------------------|-------------|
| | Y |
| gf180mcu_osu_sc_gp9t3v3__tielo | 5.16285 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|--------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tielo | 0.00000 | 0.00000 | 0.00000 |

GF180MCU_OSU_SC_GP9T3V3__TINV_16

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tinv_16 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|----------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tinv_16 | 0.00237 | 0.00117 | 0.00241 | 10.87854 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tinv_16 | 0.00000 | 4415470.00000 | 5510370.00000 |

Delay(ns) to Y rising :

Delay(ns) to Y falling :

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Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3_tinv_16 | A | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | A | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN_BAR | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN_BAR | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3_tinv_16 | A | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | A | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN_BAR | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |
| | EN_BAR | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 | 999999999999999635896294965248.00000 |

GF180MCU_OSU_SC_GP9T3V3__TINV_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 1 |
| 0 | x | 1 | HiZ |
| 1 | 0 | x | HiZ |
| 1 | 1 | x | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | 0.00413 | 0.00129 | 0.00267 | 0.76770 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | 0.00000 | 0.00032 | 0.00090 |

Delay Information

Delay(ns) to Y rising :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | A->Y (FR) | 0.06327 | 0.93640 | 9.57806 |
| | A->Y (FR) | 0.05111 | 0.94139 | 6.56566 |
| | EN->Y (FR) | 0.05111 | 0.94139 | 6.56566 |
| | EN_BAR->Y (FR) | 0.08089 | 0.65751 | 7.70910 |

Delay(ns) to Y falling :

| Cell Name | Timing Arc(Dir) | Delay(ns) | | |
|---------------------------------|-----------------|-----------|---------|---------|
| | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | A->Y (RF) | 0.05245 | 0.64777 | 7.14983 |
| | A->Y (FF) | 0.05111 | 0.94139 | 6.56566 |
| | EN->Y (RF) | 0.04490 | 0.39639 | 5.43990 |
| | EN_BAR->Y (FF) | 0.05111 | 0.94139 | 6.56566 |

Power Information

Internal switching power(pJ) to Y rising :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|--------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | A | 0.02169 | 0.05813 | 0.21371 |
| | A | -0.00014 | 0.03627 | 0.19172 |
| | EN_BAR | 0.02886 | 0.02908 | 0.02983 |
| | EN_BAR | 0.00406 | 0.00406 | 0.00406 |

Internal switching power(pJ) to Y falling :

| Cell Name | Input | Power(pJ) | | |
|---------------------------------|-------|-----------|---------|---------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | A | -0.00004 | 0.03508 | 0.18263 |
| | A | 0.02178 | 0.05699 | 0.20491 |
| | EN | 0.00711 | 0.00711 | 0.00711 |
| | EN | 0.02060 | 0.02064 | 0.02258 |

Passive power(pJ) for A rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | (EN_BAR * !Y) | -0.00480 | -0.00479 | -0.00475 |
| | (EN_BAR * !Y) | 0.00747 | 0.00750 | 0.00746 |
| | (!EN * Y) | -0.00868 | -0.00873 | -0.00871 |
| | (!EN * Y) | 0.00287 | 0.00285 | 0.00279 |

Passive power(pJ) for A falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|---------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | (EN_BAR * !Y) | 0.00532 | 0.00500 | 0.00484 |
| | (EN_BAR * !Y) | -0.00683 | -0.00727 | -0.00746 |
| | (!EN * Y) | 0.00868 | 0.00873 | 0.00871 |
| | (!EN * Y) | -0.00282 | -0.00284 | -0.00279 |

Passive power(pJ) for EN rising (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | (A * !Y) | -0.00012 | -0.00005 | -0.00004 |
| | (A * !Y) | 0.00619 | 0.00623 | 0.00620 |
| | (!A * EN_BAR) + (!A * !EN_BAR * Y) | 0.00000 | 0.00000 | 0.00000 |
| | (!A * EN_BAR) + (!A * !EN_BAR * Y) | 0.00651 | 0.00656 | 0.00648 |

Passive power(pJ) for EN falling (conditional):

| Cell Name | When | Power(pJ) | | |
|---------------------------------|------------------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinv_1 | (A * !Y) | 0.00019 | 0.00005 | 0.00004 |
| | (A * !Y) | -0.00601 | -0.00623 | -0.00620 |
| | (!A * EN_BAR) + (!A * !EN_BAR * Y) | 0.00000 | 0.00000 | 0.00000 |
| | (!A * EN_BAR) + (!A * !EN_BAR * Y) | -0.00637 | -0.00652 | -0.00647 |

Passive power(pJ) for EN_BAR rising (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinvt_1 | $(A * EN * !Y) + (A * !EN)$ | -0.01308 | -0.01344 | -0.01339 |
| | $(A * EN * !Y) + (A * !EN)$ | 0.00004 | -0.00000 | -0.00000 |
| | $(!A * Y)$ | -0.01226 | -0.01289 | -0.01288 |
| | $(!A * Y)$ | 0.00023 | 0.00007 | 0.00005 |

Passive power(pJ) for EN_BAR falling (conditional):

| Cell Name | When | Power(pJ) | | |
|----------------------------------|-----------------------------|-----------|----------|----------|
| | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__tinvt_1 | $(A * EN * !Y) + (A * !EN)$ | 0.01343 | 0.01344 | 0.01339 |
| | $(A * EN * !Y) + (A * !EN)$ | 0.00000 | 0.00000 | 0.00000 |
| | $(!A * Y)$ | 0.01297 | 0.01289 | 0.01288 |
| | $(!A * Y)$ | -0.00012 | -0.00007 | -0.00005 |

GF180MCU_OSU_SC_GP9T3V3__TINV_2

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tinv_2 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tinv_2 | 0.00239 | 0.00117 | 0.00241 | 1.38657 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|--------------|--------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tinv_2 | 0.00000 | 927990.00000 | 972297.00000 |

Delay(ns) to Y rising :

Delay(ns) to Y falling :

207

Internal switching power(pJ) to Y rising :

Internal switching power(pJ) to Y falling :

208

GF180MCU_OSU_SC_GP9T3V3__TINV_4

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tinv_4 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tinv_4 | 0.00237 | 0.00117 | 0.00241 | 2.76800 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tinv_4 | 0.00000 | 1426200.00000 | 1620590.00000 |

Delay(ns) to Y rising :

Delay(ns) to Y falling :

210

Internal switching power(pJ) to Y rising :

Internal switching power(pJ) to Y falling :

211

GF180MCU_OSU_SC_GP9T3V3__TINV_8

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | | OUTPUT |
|-------|----|--------|--------|
| A | EN | EN_BAR | Y |
| 0 | x | 0 | 0 |
| 0 | x | 1 | 1 |
| 1 | x | x | 1 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__tinv_8 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | | Max Cap(pf) |
|---------------------------------|-------------|---------|---------|-------------|
| | A | EN | EN_BAR | Y |
| gf180mcu_osu_sc_gp9t3v3__tinv_8 | 0.00237 | 0.00117 | 0.00241 | 5.49376 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------------|---------------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__tinv_8 | 0.00000 | 2422620.00000 | 2917180.00000 |

Delay(ns) to Y rising :

Delay(ns) to Y falling :

213

Internal switching power(pJ) to Y rising :

Internal switching power(pJ) to Y falling :

214

GF180MCU_OSU_SC_GP9T3V3__XNOR2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Footprint

| Cell Name | Area |
|----------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|----------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | 0.00806 | 0.00798 | 0.78925 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|----------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | 0.00000 | 0.00288 | 0.00353 |

Delay Information

Delay(ns) to Y rising (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|----------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | A->Y (RR) | B | 0.15057 | 0.64067 | 6.49144 |
| | A->Y (FR) | !B | 0.11222 | 1.01224 | 9.84618 |
| | B->Y (RR) | A | 0.12126 | 0.62708 | 6.65943 |
| | B->Y (FR) | !A | 0.13276 | 0.86357 | 8.68525 |

Delay(ns) to Y falling (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|----------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | A->Y (FF) | B | 0.16445 | 0.75328 | 6.42840 |
| | A->Y (RF) | !B | 0.07443 | 0.53805 | 6.11426 |
| | B->Y (FF) | A | 0.12382 | 0.70322 | 6.37809 |
| | B->Y (RF) | !A | 0.10564 | 0.59747 | 6.21650 |

Power Information

Internal switching power(pJ) to Y rising (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|----------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | A | B | 0.03150 | 0.11820 | 0.70846 |
| | A | B | 0.06445 | 0.15105 | 0.74078 |
| | A | !B | 0.06266 | 0.19071 | 0.94275 |
| | A | !B | 0.01841 | 0.14620 | 0.89852 |
| | B | A | 0.01355 | 0.10133 | 0.69052 |
| | B | A | 0.05396 | 0.14182 | 0.73084 |
| | B | !A | 0.07188 | 0.19987 | 0.99091 |
| | B | !A | 0.01824 | 0.14604 | 0.93700 |

Internal switching power(pJ) to Y falling (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|----------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__xnor2_1 | A | B | 0.07882 | 0.16839 | 0.75300 |
| | A | B | 0.04752 | 0.13712 | 0.72262 |
| | A | !B | 0.02549 | 0.14696 | 0.89953 |
| | A | !B | 0.06906 | 0.19082 | 0.94320 |
| | B | A | 0.06449 | 0.15440 | 0.74101 |
| | B | A | 0.02375 | 0.11386 | 0.70118 |
| | B | !A | 0.03665 | 0.16184 | 0.93352 |
| | B | !A | 0.08960 | 0.21503 | 0.98716 |

GF180MCU_OSU_SC_GP9T3V3__XOR2_1

gf180mcu_osu_sc_gp9t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

| INPUT | | OUTPUT |
|-------|---|--------|
| A | B | Y |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

Footprint

| Cell Name | Area |
|---------------------------------|---------|
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | 0.00000 |

Pin Capacitance Information

| Cell Name | Pin Cap(pf) | | Max Cap(pf) |
|---------------------------------|-------------|---------|-------------|
| | A | B | Y |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | 0.00798 | 0.00801 | 0.79014 |

Leakage Information

| Cell Name | Leakage(nW) | | |
|---------------------------------|-------------|---------|---------|
| | Min. | Avg | Max. |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | 0.00000 | 0.00288 | 0.00329 |

Delay Information

Delay(ns) to Y rising (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | A->Y (RR) | !B | 0.12136 | 0.62747 | 6.66700 |
| | A->Y (FR) | B | 0.13483 | 0.86447 | 8.69415 |
| | B->Y (RR) | !A | 0.16005 | 0.66627 | 6.70185 |
| | B->Y (FR) | A | 0.10455 | 0.81826 | 8.60272 |

Delay(ns) to Y falling (conditional):

| Cell Name | Timing Arc(Dir) | When | Delay(ns) | | |
|---------------------------------|-----------------|------|-----------|---------|---------|
| | | | First | Mid | Last |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | A->Y (FF) | !B | 0.12378 | 0.70349 | 6.38493 |
| | A->Y (RF) | B | 0.10409 | 0.59731 | 6.22156 |
| | B->Y (FF) | !A | 0.13232 | 0.69281 | 6.17699 |
| | B->Y (RF) | A | 0.09892 | 0.74032 | 7.40536 |

Power Information

Internal switching power(pJ) to Y rising (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | A | B | 0.07710 | 0.20487 | 0.99711 |
| | A | B | 0.02851 | 0.15619 | 0.94818 |
| | A | !B | 0.01211 | 0.09999 | 0.68920 |
| | A | !B | 0.05334 | 0.14119 | 0.73024 |
| | B | A | 0.06408 | 0.18880 | 0.96462 |
| | B | A | 0.02037 | 0.14493 | 0.92084 |
| | B | !A | 0.02804 | 0.11392 | 0.70278 |
| | B | !A | 0.06403 | 0.15010 | 0.73883 |

Internal switching power(pJ) to Y falling (conditional):

| Cell Name | Input | When | Power(pJ) | | |
|---------------------------------|-------|------|-----------|---------|---------|
| | | | first | mid | last |
| gf180mcu_osu_sc_gp9t3v3__xor2_1 | A | B | 0.03064 | 0.15579 | 0.92722 |
| | A | B | 0.07986 | 0.20538 | 0.97732 |
| | A | !B | 0.06577 | 0.15569 | 0.74265 |
| | A | !B | 0.02442 | 0.11450 | 0.70283 |
| | B | A | 0.03117 | 0.15417 | 0.90318 |
| | B | A | 0.07544 | 0.19883 | 0.94742 |
| | B | !A | 0.07037 | 0.16051 | 0.74752 |
| | B | !A | 0.03310 | 0.12339 | 0.71044 |