gf180mcu_12T_TT_3P3_25C.ccs Library

Cell Groups
GF180MCU_OSU_SC_12T_ADDF_1
GF180MCU_OSU_SC_12T_ADDH_1
GF180MCU_OSU_SC_12T_AND2_1
GF180MCU_OSU_SC_12T_AOI21_1
GF180MCU_OSU_SC_12T_BUF_1
GF180MCU_OSU_SC_12T_BUF_2
GF180MCU_OSU_SC_12T_DFFN_1
GF180MCU_OSU_SC_12T_DFFSR_1
GF180MCU_OSU_SC_12T_DFF_1
GF180MCU_OSU_SC_12T_INV_1
GF180MCU_OSU_SC_12T_INV_2
GF180MCU_OSU_SC_12T_MUX2_1
GF180MCU_OSU_SC_12T_NAND2_1
GF180MCU_OSU_SC_12T_NOR2_1
GF180MCU_OSU_SC_12T_OAI21_1
GF180MCU_OSU_SC_12T_OR2_1
GF180MCU_OSU_SC_12T_TIEHI
GF180MCU_OSU_SC_12T_TIELO
GF180MCU_OSU_SC_12T_XNOR2_1
GF180MCU_OSU_SC_12T_XOR2_1

GF180MCU_OSU_SC_12T_ADDF_1

gf180mcu_12T_TT_3P3_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_12T_addf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	A	B	CI	CO	S
gf180mcu_osu_sc_12T_addf_1	0.01544	0.01474	0.01139	1.56005	1.56440

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_addf_1	A->CO (RR)	0.21226	0.82498	7.30463
	B->CO (RR)	0.21812	0.91223	7.79397
	CI->CO (RR)	0.19568	0.86509	7.29934

Delay(ns) to CO falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_addf_1	A->CO (FF)	0.23877	0.92764	8.08060
	B->CO (FF)	0.22328	1.00556	8.63926
	CI->CO (FF)	0.18905	0.98762	8.32289

Delay(ns) to S rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_addf_1	A->S (-R)	0.41985	1.11535	8.57501
	B->S (-R)	0.40110	1.20650	9.31311
	CI->S (-R)	0.36483	1.14294	8.87090

Delay(ns) to S falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_addf_1	A->S (-F)	0.25030	1.07226	9.12987
	B->S (-F)	0.29803	1.04001	8.81376
	CI->S (-F)	0.31935	0.98920	8.39005

Power Information

Internal switching power(pJ) to CO rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addf_1	A	0.04922	0.06452	0.36350
	B	0.04907	0.06258	0.32977
	CI	0.03523	0.05326	0.28965

Internal switching power(pJ) to CO falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addf_1	A	0.10013	0.11548	0.41357
	B	0.08228	0.09631	0.36764
	CI	0.07548	0.09324	0.33545

Internal switching power(pJ) to S rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addf_1	A	0.02794	0.04879	0.48440
	B	0.03179	0.05785	0.53372
	CI	0.04279	0.07115	0.60641

Internal switching power(pJ) to S falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addf_1	A	0.10703	0.13061	0.57078
	B	0.10848	0.13479	0.61182
	CI	0.11729	0.14522	0.68929

GF180MCU_OSU_SC_12T_ADDH_1

gf180mcu_12T_TT_3P3_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_12T_addh_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	A	B	CO	S
gf180mcu_osu_sc_12T_addh_1	0.00767	0.00696	1.55630	1.55391

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_addh_1	A->CO (RR)	0.16043	0.77148	7.36139
	B->CO (RR)	0.14916	0.82604	7.77648

Delay(ns) to CO falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_addh_1	A->CO (FF)	0.12722	0.81646	7.68953
	B->CO (FF)	0.11494	0.77045	7.25974

Delay(ns) to S rising (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_12T_addh_1	A->S (RR)	!B	0.16308	0.82230	7.61775
	A->S (FR)	B	0.23110	0.95569	8.21893
	B->S (RR)	!A	0.12932	0.73267	6.99757
	B->S (FR)	A	0.24907	0.93424	7.75698

Delay(ns) to S falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_12T_addh_1	A->S (FF)	!B	0.17256	0.80695	7.50836
	A->S (RF)	B	0.25638	0.79085	6.32943
	B->S (FF)	!A	0.14500	0.86146	8.02563
	B->S (RF)	A	0.24469	0.84875	6.87223

Power Information

Internal switching power(pJ) to CO rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addh_1	A	0.00000	0.00000	0.00000
	A	0.04321	0.06732	0.37997
	B	0.00000	0.00000	0.00000
	B	0.04747	0.07111	0.35632

Internal switching power(pJ) to CO falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_addh_1	A	0.00000	0.00000	0.00000
	A	0.05988	0.08760	0.40518
	B	0.00000	0.00000	0.00000
	B	0.05914	0.08243	0.36584

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_addh_1	A	B	0.00000	0.00000	0.00000
	A	B	0.05992	0.08759	0.40444
	A	!B	0.00000	0.00000	0.00000
	A	!B	0.02972	0.06800	0.56744
	B	A	0.00000	0.00000	0.00000
	B	A	0.05917	0.08233	0.36600
	B	!A	0.00000	0.00000	0.00000
	B	!A	0.02040	0.05755	0.49053

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_addh_1	A	B	0.00000	0.00000	0.00000
	A	B	0.04318	0.06739	0.37927
	A	!B	0.00000	0.00000	0.00000
	A	!B	0.07269	0.10824	0.60704
	B	A	0.00000	0.00000	0.00000
	B	A	0.04737	0.07111	0.35537
	B	!A	0.00000	0.00000	0.00000
	B	!A	0.06344	0.10067	0.53328

GF180MCU_OSU_SC_12T_AND2_1

gf180mcu_12T_TT_3P3_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_12T_and2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_12T_and2_1	0.00405	0.00402	1.55006

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_and2_1	A->Y (RR)	0.12009	0.76302	7.61880
	B->Y (RR)	0.13115	0.71689	7.23150

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_and2_1	A->Y (FF)	0.09474	0.71457	7.10646
	B->Y (FF)	0.10741	0.76851	7.55675

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	A	0.00000	0.00000	0.00000
	A	0.02734	0.07561	0.60473
	B	0.00000	0.00000	0.00000
	B	0.02705	0.07698	0.66143

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	A	0.00000	0.00000	0.00000
	A	0.04379	0.09379	0.62118
	B	0.00000	0.00000	0.00000
	B	0.05559	0.10901	0.69500

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	(!B * !Y)	0.00000	0.00000	0.00000
	(!B * !Y)	-0.01400	-0.01407	-0.01413

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	(!B * !Y)	0.00000	0.00000	0.00000
	(!B * !Y)	0.01418	0.01420	0.01418

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	(!A * !Y)	0.00000	0.00000	0.00000
	(!A * !Y)	-0.01351	-0.01356	-0.01352

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_and2_1	(!A * !Y)	0.00000	0.00000	0.00000
	(!A * !Y)	0.01374	0.01356	0.01355

GF180MCU_OSU_SC_12T_AOI21_1

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_12T_aoi21_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A0	A1	B	Y
gf180mcu_osu_sc_12T_aoi21_1	0.00395	0.00398	0.00405	0.78136

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_aoi21_1	A0->Y (FR)	0.12765	0.93886	8.60765
	A1->Y (FR)	0.10493	0.91265	8.52949
	B->Y (FR)	0.09054	1.03293	9.87430

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_aoi21_1	A0->Y (RF)	0.10183	0.68739	6.14950
	A1->Y (RF)	0.09006	0.79442	7.33063
	B->Y (RF)	0.03990	0.55416	5.35650

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	A0	0.00000	0.00000	0.00000
	A0	0.04880	0.06515	0.28719
	A1	0.00000	0.00000	0.00000
	A1	0.03709	0.05294	0.25783
	B	0.02543	0.05333	0.29872

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	A0	0.00000	0.00000	0.00000
	A0	0.01642	0.03292	0.23655
	A1	0.00000	0.00000	0.00000
	A1	0.01646	0.03330	0.21205
	B	-0.00066	0.02430	0.25197

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(A1 * B * !Y)	0.00000	0.00000	0.00000
	(A1 * B * !Y)	-0.01271	-0.01328	-0.01331
	(!A1 * B * !Y)	0.00000	0.00000	0.00000
	(!A1 * B * !Y)	-0.01350	-0.01355	-0.01352
	(!A1 * !B * Y)	0.00000	0.00000	0.00000
	(!A1 * !B * Y)	-0.01350	-0.01356	-0.01352

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(A1 * B * !Y)	0.00000	0.00000	0.00000
	(A1 * B * !Y)	0.01346	0.01328	0.01331
	(!A1 * B * !Y)	0.00000	0.00000	0.00000
	(!A1 * B * !Y)	0.01368	0.01357	0.01355
	(!A1 * !B * Y)	0.00000	0.00000	0.00000
	(!A1 * !B * Y)	0.01375	0.01356	0.01355

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(B * !Y)	0.00000	0.00000	0.00000
	(B * !Y)	-0.01272	-0.01334	-0.01333
	(!A0 * !B * Y)	0.00000	0.00000	0.00000
	(!A0 * !B * Y)	-0.01403	-0.01407	-0.01413

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(B * !Y)	0.00000	0.00000	0.00000
	(B * !Y)	0.01337	0.01334	0.01333
	(!A0 * !B * Y)	0.00000	0.00000	0.00000
	(!A0 * !B * Y)	0.01425	0.01419	0.01418

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(A0 * A1 * !Y)	0.00000	0.00000	0.00000
	(A0 * A1 * !Y)	-0.00452	-0.00459	-0.00451

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_aoi21_1	(A0 * A1 * !Y)	0.00000	0.00000	0.00000
	(A0 * A1 * !Y)	0.00499	0.00499	0.00463

GF180MCU_OSU_SC_12T_BUF_1

gf180mcu_12T_TT_3P3_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_12T_buf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_12T_buf_1	0.00404	1.55321

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_buf_1	A->Y (RR)	0.08075	0.64773	6.92335

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_buf_1	A->Y (FF)	0.08500	0.73187	7.57959

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_buf_1	A	0.00000	0.00000	0.00000
	A	0.01909	0.07934	0.69849

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_buf_1	A	0.00000	0.00000	0.00000
	A	0.04118	0.10239	0.72083

GF180MCU_OSU_SC_12T_BUF_2

gf180mcu_12T_TT_3P3_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_12T_buf_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_12T_buf_2	0.00405	3.09887

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_buf_2	A->Y (RR)	0.09345	0.57219	7.00607

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_buf_2	A->Y (FF)	0.09890	0.66881	7.66648

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_buf_2	A	0.00000	0.00000	0.00000
	A	0.04100	0.10064	0.71775

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_buf_2	A	0.00000	0.00000	0.00000
	A	0.06286	0.12252	0.73947

GF180MCU_OSU_SC_12T_DFFN_1

gf180mcu_12T_TT_3P3_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_12T_dffn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	D	CLKN	Q	QN
gf180mcu_osu_sc_12T_dffn_1	0.00393	0.01039	1.54739	1.56075

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_dffn_1	CLKN->Q (RR)	0.27614	1.58528	16.33690
	QN->Q (FR)	0.03870	0.87113	10.19450

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffn_1	CLKN->Q (RF)	0.36340	1.61794	16.15170
	QN->Q (RF)	0.03556	0.73327	8.68649

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffn_1	CLKN->QN (RR)	0.32010	0.89992	6.99722

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffn_1	CLKN->QN (RF)	0.22879	0.79167	6.16787

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffn_1	hold	CLKN (R)	-0.11075	-0.10020	0.56291
	setup	CLKN (R)	0.19688	0.22628	0.75286

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffn_1	hold	CLKN (R)	-0.18349	-0.44900	-4.93177
	setup	CLKN (R)	0.20931	0.45919	5.16124

Constraints(ns) for CLKN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffn_1	min_pulse_width	CLKN ()	0.14310	0.93384	16.50020
	min_pulse_width	CLKN ()	0.19811	0.93384	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_12T_dffn_1	min_pulse_width	CLKN ()	0.24624	0.93384	16.50020
	min_pulse_width	CLKN ()	0.16373	0.93384	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	0.04906	0.10711	0.64313

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	0.05836	0.09421	0.50286

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	0.05836	0.09428	0.50269

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	0.04898	0.10713	0.64129

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	-0.01310	-0.01341	-0.01335
	(!CLKN * Q * !QN) + (!CLKN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLKN * Q * !QN) + (!CLKN * !Q * QN)	0.06053	0.10755	0.71342

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	CLKN	0.00000	0.00000	0.00000
	CLKN	0.01355	0.01345	0.01335
	(!CLKN * Q * !QN) + (!CLKN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLKN * Q * !QN) + (!CLKN * !Q * QN)	0.09223	0.13958	0.74656

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	(D * Q * !QN)	0.00000	0.00000	0.00000
	(D * Q * !QN)	-0.00099	0.05513	0.66646
	(!D * !Q * QN)	0.00000	0.00000	0.00000
	(!D * !Q * QN)	-0.00170	0.05557	0.66610

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffn_1	(D * Q * !QN)	0.00000	0.00000	0.00000
	(D * Q * !QN)	0.04613	0.10627	0.71738
	(D * !Q * QN)	0.00000	0.00000	0.00000
	(D * !Q * QN)	0.12358	0.18261	0.99209
	(!D * Q * !QN)	0.00000	0.00000	0.00000
	(!D * Q * !QN)	0.11973	0.22474	1.16805
	(!D * !Q * QN)	0.00000	0.00000	0.00000
	(!D * !Q * QN)	0.05307	0.11084	0.72024

GF180MCU_OSU_SC_12T_DFFSR_1

gf180mcu_12T_TT_3P3_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_12T_dffsr_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)	
	D	RN	SN	CLK	Q	QN
gf180mcu_osu_sc_12T_dffsr_1	0.00394	0.00404	0.00801	0.01039	1.54794	1.56441

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_dffsr_1	CLK->Q (RR)	0.40037	1.71038	16.45910
	QN->Q (FR)	0.03870	0.87145	10.19690
	RN->Q (RR)	0.29353	1.60204	16.46110
	SN->Q (FR)	0.27896	1.65552	17.31980

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffsr_1	CLK->Q (RF)	0.45626	1.72211	16.25750
	QN->Q (RF)	0.03556	0.73343	8.68858
	RN->Q (FF)	0.25621	1.65446	17.40900

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffsr_1	CLK->QN (RR)	0.41217	1.00434	7.11377
	RN->QN (FR)	0.21269	0.93683	8.26165

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dffsr_1	CLK->QN (RF)	0.34895	0.91539	6.30141
	RN->QN (RF)	0.24361	0.80946	6.31122
	SN->QN (FF)	0.22829	0.86064	7.15805

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	hold	CLK (R)	-0.15030	-0.13174	0.54700
	setup	CLK (R)	0.30171	0.33431	0.65506

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	hold	CLK (R)	-0.21857	-0.45706	-5.02530
	setup	CLK (R)	0.25733	0.47364	5.14756

Constraints(ns) for D rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	hold	CLK (R)	-0.15030	-0.13174	0.54700
	setup	CLK (R)	0.30171	0.33431	0.65506

Constraints(ns) for D falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	hold	CLK (R)	-0.21857	-0.45706	-5.02530
	setup	CLK (R)	0.25733	0.47364	5.14756

Constraints(ns) for RN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	recovery	CLK (R)	0.17492	0.24207	1.44035
	removal	CLK (R)	-0.01699	-0.01712	-0.05223
	hold	SN (R)	-0.20252	-0.35858	-0.82960
	setup	SN (R)	0.23792	0.43306	5.19221

Constraints(ns) for RN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	recovery	CLK (R)	0.17492	0.24207	1.44035
	removal	CLK (R)	-0.01699	-0.01712	-0.05223
	hold	SN (R)	-0.20252	-0.35858	-0.82960
	hold	SN (R)	-0.20313	-0.35858	-0.83258
	setup	SN (R)	0.23438	0.42755	5.01062
	setup	SN (R)	0.23792	0.43306	5.19221

Constraints(ns) for RN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	min_pulse_width	RN ()	0.15685	0.93384	16.50020
	min_pulse_width	RN ()	0.15685	0.93384	16.50020

Constraints(ns) for SN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	recovery	CLK (R)	0.07391	0.11674	5.50811
	removal	CLK (R)	-0.03347	-0.06990	-0.61626

Constraints(ns) for SN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	recovery	CLK (R)	0.07391	0.11674	5.50811
	removal	CLK (R)	-0.03347	-0.06990	-0.61626

Constraints(ns) for SN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	min_pulse_width	SN ()	0.21874	0.93384	16.50020
	min_pulse_width	SN ()	0.22217	0.93384	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_12T_dffsr_1	min_pulse_width	CLK ()	0.20498	0.93384	16.50020
	min_pulse_width	CLK ()	0.23592	0.93384	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_12T_dffsr_1	min_pulse_width	CLK ()	0.35282	0.93384	16.50020
	min_pulse_width	CLK ()	0.22217	0.93384	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	0.06419	0.11670	0.65038
	RN	0.10463	0.14160	0.55926
	SN	-0.00649	-0.31612	-4.21425
	SN	0.09604	0.13490	0.62024

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	0.06751	0.10155	0.50950
	RN	-0.00649	-0.31612	-4.21424
	RN	0.11615	0.15604	0.59396

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	0.06744	0.10165	0.50884
	RN	-0.00649	-0.31813	-4.25872
	RN	0.11612	0.15614	0.59183

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	0.06410	0.11657	0.64830
	RN	0.10456	0.14122	0.55689
	SN	-0.00649	-0.31813	-4.25894
	SN	0.09599	0.13486	0.61992

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	-0.01310	-0.01341	-0.01335
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.08512	0.12602	0.71637
	(!CLK * RN * !SN * Q * !QN)	0.00000	0.00000	0.00000
	(!CLK * RN * !SN * Q * !QN)	0.03795	0.07660	0.62199
	(!CLK * !RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * !RN * SN * !Q * QN)	0.03780	0.07679	0.62211
	(!CLK * !RN * !SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * !RN * !SN * !Q * QN)	0.03794	0.07660	0.62199

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	CLK	0.00000	0.00000	0.00000
	CLK	0.01355	0.01345	0.01335
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.10664	0.14960	0.74094
	(!CLK * RN * !SN * Q * !QN)	0.00000	0.00000	0.00000
	(!CLK * RN * !SN * Q * !QN)	0.04886	0.08863	0.63653
	(!CLK * !RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * !RN * SN * !Q * QN)	0.04898	0.08870	0.63640
	(!CLK * !RN * !SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * !RN * !SN * !Q * QN)	0.04886	0.08868	0.63653

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.00000	0.00000	0.00000
	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.00873	0.06444	0.67566
	(!CLK * D * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * D * SN * !Q * QN)	0.05482	0.11317	0.75218

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.00000	0.00000	0.00000
	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.03656	0.09618	0.70816
	(!CLK * D * SN * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * D * SN * !Q * QN)	0.07803	0.14032	0.78403

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	-0.02806	-0.02813	-0.02827
	(!RN * !Q * QN)	0.00000	0.00000	0.00000
	(!RN * !Q * QN)	-0.02631	-0.02705	-0.02698
	(!CLK * !D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(!CLK * !D * RN * Q * !QN)	0.02979	0.06624	0.55614

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	0.02845	0.02836	0.02836
	(!RN * !Q * QN)	0.00000	0.00000	0.00000
	(!RN * !Q * QN)	0.02722	0.02737	0.02698
	(!CLK * !D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(!CLK * !D * RN * Q * !QN)	0.06348	0.09611	0.58926

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(D * RN * Q * !QN)	-0.00099	0.05513	0.66646
	(D * !RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(D * !RN * SN * !Q * QN)	0.03501	0.09476	0.73405
	(D * !RN * !SN * !Q * QN)	0.00000	0.00000	0.00000
	(D * !RN * !SN * !Q * QN)	0.03487	0.09424	0.73378
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.00000	0.00000	0.00000
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	-0.00168	0.05556	0.66610
	(!D * RN * !SN * Q * !QN)	0.00000	0.00000	0.00000
	(!D * RN * !SN * Q * !QN)	0.02397	0.11787	1.15806

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dffsr_1	(D * RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(D * RN * SN * !Q * QN)	0.14851	0.20738	1.00237
	(D * RN * Q * !QN)	0.00000	0.00000	0.00000
	(D * RN * Q * !QN)	0.04604	0.10624	0.71738
	(D * !RN * SN * !Q * QN)	0.00000	0.00000	0.00000
	(D * !RN * SN * !Q * QN)	0.09268	0.15875	0.79676
	(D * !RN * !SN * !Q * QN)	0.00000	0.00000	0.00000
	(D * !RN * !SN * !Q * QN)	0.09294	0.15882	0.79678
	(!D * RN * SN * Q * !QN)	0.00000	0.00000	0.00000
	(!D * RN * SN * Q * !QN)	0.13420	0.23462	1.17447
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.00000	0.00000	0.00000
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.05306	0.11084	0.72024
	(!D * RN * !SN * Q * !QN)	0.00000	0.00000	0.00000
	(!D * RN * !SN * Q * !QN)	0.06789	0.16597	1.20685

GF180MCU_OSU_SC_12T_DFF_1

gf180mcu_12T_TT_3P3_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_12T_dff_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	D	CLK	Q	QN
gf180mcu_osu_sc_12T_dff_1	0.00393	0.01039	1.54739	1.56075

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_dff_1	CLK->Q (RR)	0.27614	1.58528	16.33690
	QN->Q (FR)	0.03870	0.87113	10.19450

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dff_1	CLK->Q (RF)	0.36340	1.61794	16.15170
	QN->Q (RF)	0.03556	0.73327	8.68649

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dff_1	CLK->QN (RR)	0.32010	0.89992	6.99722

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_dff_1	CLK->QN (RF)	0.22879	0.79167	6.16787

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dff_1	hold	CLK (R)	-0.11075	-0.10020	0.56291
	setup	CLK (R)	0.19688	0.22628	0.75286

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dff_1	hold	CLK (R)	-0.18349	-0.44900	-4.93177
	setup	CLK (R)	0.20931	0.45919	5.16124

Constraints(ns) for CLK rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_12T_dff_1	min_pulse_width	CLK ()	0.14310	0.93384	16.50020
	min_pulse_width	CLK ()	0.19811	0.93384	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_12T_dff_1	min_pulse_width	CLK ()	0.24624	0.93384	16.50020
	min_pulse_width	CLK ()	0.16373	0.93384	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	0.04906	0.10711	0.64313

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	0.05836	0.09421	0.50286

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	0.05836	0.09428	0.50269

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	0.04898	0.10713	0.64129

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	-0.01310	-0.01341	-0.01335
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.06053	0.10755	0.71342

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	CLK	0.00000	0.00000	0.00000
	CLK	0.01355	0.01345	0.01335
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.00000	0.00000	0.00000
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.09223	0.13958	0.74656

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	(D * Q * !QN)	0.00000	0.00000	0.00000
	(D * Q * !QN)	-0.00099	0.05513	0.66646
	(!D * !Q * QN)	0.00000	0.00000	0.00000
	(!D * !Q * QN)	-0.00170	0.05557	0.66610

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_dff_1	(D * Q * !QN)	0.00000	0.00000	0.00000
	(D * Q * !QN)	0.04613	0.10627	0.71738
	(D * !Q * QN)	0.00000	0.00000	0.00000
	(D * !Q * QN)	0.12358	0.18261	0.99209
	(!D * Q * !QN)	0.00000	0.00000	0.00000
	(!D * Q * !QN)	0.11973	0.22474	1.16805
	(!D * !Q * QN)	0.00000	0.00000	0.00000
	(!D * !Q * QN)	0.05307	0.11084	0.72024

GF180MCU_OSU_SC_12T_INV_1

gf180mcu_12T_TT_3P3_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_12T_inv_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_12T_inv_1	0.00404	1.50058

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_inv_1	A->Y (FR)	0.03870	0.86218	9.99632

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_inv_1	A->Y (RF)	0.03556	0.72347	8.50859

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_inv_1	A	0.00000	0.00000	0.00000
	A	0.02076	0.04885	0.25439

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_inv_1	A	0.00000	0.00000	0.00000
	A	-0.00164	0.02301	0.21096

GF180MCU_OSU_SC_12T_INV_2

gf180mcu_12T_TT_3P3_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_12T_inv_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_12T_inv_2	0.00808	3.00107

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_inv_2	**A->Y (FR)**	0.03321	0.74030	9.99617

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_inv_2	**A->Y (RF)**	0.03057	0.60114	8.50842

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_inv_2	A	0.00000	0.00000	0.00000
	A	0.04109	0.10518	0.50879

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_inv_2	A	0.00000	0.00000	0.00000
	A	-0.00367	0.05307	0.42193

GF180MCU_OSU_SC_12T_MUX2_1

gf180mcu_12T_TT_3P3_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_12T_mux2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A	B	Sel	Y
gf180mcu_osu_sc_12T_mux2_1	0.24485	0.24485	0.00808	0.24039

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_mux2_1	A->Y (RR)	-	0.02530	0.14622	0.80157
	B->Y (RR)	-	0.02784	0.14765	0.80245
	Sel->Y (RR)	(!A * B)	0.06591	0.26946	0.84092
	Sel->Y (FR)	(A * !B)	0.04690	0.38499	2.58659

Delay(ns) to Y falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_12T_mux2_1	A->Y (FF)	-	0.02924	0.15906	0.84003
	B->Y (FF)	-	0.02645	0.15728	0.83896
	Sel->Y (FF)	(!A * B)	0.07399	0.39138	2.08688
	Sel->Y (RF)	(A * !B)	0.04306	0.27709	1.46441

Power Information

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_mux2_1	A	-	0.00000	0.00000	0.00000
	A	-	-0.03048	-0.03048	-0.03049
	B	-	0.00000	0.00000	0.00000
	B	-	-0.02380	-0.02386	-0.02388
	Sel	(A * !B)	0.00000	0.00000	0.00000
	Sel	(A * !B)	0.01015	0.07295	0.68712
	Sel	(!A * B)	0.00000	0.00000	0.00000
	Sel	(!A * B)	-0.01859	0.03959	0.65235

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_mux2_1	A	-	0.00000	0.00000	0.00000
	A	-	0.03048	0.03048	0.03054
	B	-	0.00000	0.00000	0.00000
	B	-	0.02380	0.02386	0.02390
	Sel	(A * !B)	0.00000	0.00000	0.00000
	Sel	(A * !B)	0.01503	0.07476	0.68925
	Sel	(!A * B)	0.00000	0.00000	0.00000
	Sel	(!A * B)	0.05918	0.11931	0.73129

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(B * Sel * Y) + (!B * Sel * !Y)	0.00000	0.00000	0.00000
	(B * Sel * Y) + (!B * Sel * !Y)	-0.00715	-0.00721	-0.00714

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(B * Sel * Y) + (!B * Sel * !Y)	0.00000	0.00000	0.00000
	(B * Sel * Y) + (!B * Sel * !Y)	0.00715	0.00721	0.00714

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(A * !Sel * Y) + (!A * !Sel * !Y)	0.00000	0.00000	0.00000
	(A * !Sel * Y) + (!A * !Sel * !Y)	-0.00845	-0.00851	-0.00842

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(A * !Sel * Y) + (!A * !Sel * !Y)	0.00000	0.00000	0.00000
	(A * !Sel * Y) + (!A * !Sel * !Y)	0.00845	0.00851	0.00842

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(A * B * Y)	0.00000	0.00000	0.00000
	(A * B * Y)	-0.00192	0.05761	0.67095
	(!A * !B * !Y)	0.00000	0.00000	0.00000
	(!A * !B * !Y)	-0.00172	0.05731	0.67088

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_mux2_1	(A * B * Y)	0.00000	0.00000	0.00000
	(A * B * Y)	0.03656	0.09773	0.70976
	(!A * !B * !Y)	0.00000	0.00000	0.00000
	(!A * !B * !Y)	0.03301	0.09491	0.70857

GF180MCU_OSU_SC_12T_NAND2_1

gf180mcu_12T_TT_3P3_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_12T_nand2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_12T_nand2_1	0.00404	0.00402	1.04725

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_nand2_1	A->Y (FR)	0.04661	0.76188	7.95705
	B->Y (FR)	0.05740	0.77716	7.99777

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_nand2_1	A->Y (RF)	0.06063	0.85879	9.03372
	B->Y (RF)	0.07170	0.75525	7.88183

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	A	0.00000	0.00000	0.00000
	A	0.02317	0.04568	0.23835
	B	0.00000	0.00000	0.00000
	B	0.03472	0.05914	0.26647

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	A	0.00000	0.00000	0.00000
	A	0.00552	0.02724	0.21418
	B	0.00000	0.00000	0.00000
	B	0.00516	0.02711	0.23854

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	(!B * Y)	0.00000	0.00000	0.00000
	(!B * Y)	-0.01407	-0.01407	-0.01414

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	(!B * Y)	0.00000	0.00000	0.00000
	(!B * Y)	0.01422	0.01420	0.01418

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	(!A * Y)	0.00000	0.00000	0.00000
	(!A * Y)	-0.01353	-0.01355	-0.01352

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nand2_1	(!A * Y)	0.00000	0.00000	0.00000
	(!A * Y)	0.01374	0.01357	0.01355

GF180MCU_OSU_SC_12T_NOR2_1

gf180mcu_12T_TT_3P3_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_12T_nor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_12T_nor2_1	0.00398	0.00404	0.77993

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_nor2_1	A->Y (FR)	0.09557	0.91732	8.70480
	B->Y (FR)	0.06748	1.00724	9.83696

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_nor2_1	A->Y (RF)	0.05443	0.57599	5.36489
	B->Y (RF)	0.04073	0.54888	5.28751

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	A	0.00000	0.00000	0.00000
	A	0.03530	0.05754	0.32303
	B	0.00000	0.00000	0.00000
	B	0.02536	0.04911	0.26773

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	A	0.00000	0.00000	0.00000
	A	0.01116	0.03344	0.25573
	B	0.00000	0.00000	0.00000
	B	-0.00010	0.02201	0.21945

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	(B * !Y)	0.00000	0.00000	0.00000
	(B * !Y)	-0.01247	-0.01342	-0.01336

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	(B * !Y)	0.00000	0.00000	0.00000
	(B * !Y)	0.01342	0.01342	0.01336

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	(A * !Y)	0.00000	0.00000	0.00000
	(A * !Y)	-0.00453	-0.00459	-0.00451

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_nor2_1	(A * !Y)	0.00000	0.00000	0.00000
	(A * !Y)	0.00486	0.00485	0.00460

GF180MCU_OSU_SC_12T_OAI21_1

gf180mcu_12T_TT_3P3_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_12T_oai21_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A0	A1	B	Y
gf180mcu_osu_sc_12T_oai21_1	0.00395	0.00402	0.00404	0.77902

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_oai21_1	A0->Y (FR)	0.13171	0.94115	8.59380
	A1->Y (FR)	0.10406	1.03145	9.74633
	B->Y (FR)	0.04602	0.69576	6.75524

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_oai21_1	A0->Y (RF)	0.10609	0.68875	6.13624
	A1->Y (RF)	0.07865	0.65359	6.04630
	B->Y (RF)	0.09051	0.80231	7.41954

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	A0	0.00000	0.00000	0.00000
	A0	0.04825	0.06570	0.28834
	A1	0.00000	0.00000	0.00000
	A1	0.03839	0.05744	0.23966
	B	0.02271	0.05047	0.30431

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	A0	0.00000	0.00000	0.00000
	A0	0.01824	0.03485	0.23887
	A1	0.00000	0.00000	0.00000
	A1	0.00643	0.02371	0.20627
	B	0.00554	0.03154	0.27437

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(A1 * B * !Y)	0.00000	0.00000	0.00000
	(A1 * B * !Y)	-0.01242	-0.01345	-0.01338
	(A1 * !B * Y)	0.00000	0.00000	0.00000
	(A1 * !B * Y)	-0.01310	-0.01341	-0.01336
	(!A1 * !B * Y)	0.00000	0.00000	0.00000
	(!A1 * !B * Y)	-0.01350	-0.01356	-0.01352

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(A1 * B * !Y)	0.00000	0.00000	0.00000
	(A1 * B * !Y)	0.01353	0.01347	0.01338
	(A1 * !B * Y)	0.00000	0.00000	0.00000
	(A1 * !B * Y)	0.01350	0.01341	0.01336
	(!A1 * !B * Y)	0.00000	0.00000	0.00000
	(!A1 * !B * Y)	0.01361	0.01360	0.01355

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(A0 * B * !Y)	0.00000	0.00000	0.00000
	(A0 * B * !Y)	-0.00453	-0.00459	-0.00451
	(!B * Y)	0.00000	0.00000	0.00000
	(!B * Y)	-0.01320	-0.01336	-0.01331

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(A0 * B * !Y)	0.00000	0.00000	0.00000
	(A0 * B * !Y)	0.00483	0.00486	0.00460
	(!B * Y)	0.00000	0.00000	0.00000
	(!B * Y)	0.01332	0.01336	0.01331

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(!A0 * !A1 * Y)	0.00000	0.00000	0.00000
	(!A0 * !A1 * Y)	-0.01401	-0.01401	-0.01413

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_oai21_1	(!A0 * !A1 * Y)	0.00000	0.00000	0.00000
	(!A0 * !A1 * Y)	0.01424	0.01425	0.01418

GF180MCU_OSU_SC_12T_OR2_1

gf180mcu_12T_TT_3P3_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_12T_or2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_12T_or2_1	0.00404	0.00398	1.54015

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_or2_1	A->Y (RR)	0.08757	0.61008	6.20224
	B->Y (RR)	0.10623	0.68504	6.80087

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_or2_1	A->Y (FF)	0.12789	0.86358	8.38037
	B->Y (FF)	0.15600	0.81364	7.92028

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	A	0.00000	0.00000	0.00000
	A	0.02072	0.06593	0.55618
	B	0.00000	0.00000	0.00000
	B	0.03243	0.08189	0.66167

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	A	0.00000	0.00000	0.00000
	A	0.04735	0.09260	0.57925
	B	0.00000	0.00000	0.00000
	B	0.05730	0.10264	0.68097

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	(B * Y)	0.00000	0.00000	0.00000
	(B * Y)	-0.00455	-0.00459	-0.00451

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	(B * Y)	0.00000	0.00000	0.00000
	(B * Y)	0.00483	0.00486	0.00460

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	(A * Y)	0.00000	0.00000	0.00000
	(A * Y)	-0.01255	-0.01345	-0.01338

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_or2_1	(A * Y)	0.00000	0.00000	0.00000
	(A * Y)	0.01342	0.01348	0.01338

GF180MCU_OSU_SC_12T_TIEHI

gf180mcu_12T_TT_3P3_25C.ccs
Cell Library: Process , Voltage 3.30, Temp 25.00

Footprint

Cell Name	Area
gf180mcu_osu_sc_12T_tiehi	0.00000

Pin Capacitance Information

Cell Name	Max Cap(pf)
	Y
gf180mcu_osu_sc_12T_tiehi	3.44214

Leakage Information

Cell Name	Leakage(nW)		
	Min.	**Avg**	**Max.**
gf180mcu_osu_sc_12T_tiehi	0.00000	0.00000	0.00000

GF180MCU_OSU_SC_12T_TIELO

gf180mcu_12T_TT_3P3_25C.ccs
Cell Library: Process , Voltage 3.30, Temp 25.00

Footprint

Cell Name	Area
gf180mcu_osu_sc_12T_tielo	0.00000

Pin Capacitance Information

Cell Name	Max Cap(pf)
	Y
gf180mcu_osu_sc_12T_tielo	5.16285

Leakage Information

Cell Name	Leakage(nW)		
	Min.	**Avg**	**Max.**
gf180mcu_osu_sc_12T_tielo	0.00000	0.00000	0.00000

GF180MCU_OSU_SC_12T_XNOR2_1

gf180mcu_12T_TT_3P3_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_12T_xnor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_12T_xnor2_1	0.00806	0.00799	0.77792

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_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_12T_xnor2_1	A->Y (RR)	B	0.15349	0.82421	6.39663
	A->Y (FR)	!B	0.11210	1.04050	9.75512
	B->Y (RR)	A	0.12394	0.80408	6.56628
	B->Y (FR)	!A	0.13552	0.94603	8.59541

Delay(ns) to Y falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_12T_xnor2_1	A->Y (FF)	B	0.15824	0.82193	6.35742
	A->Y (RF)	!B	0.08027	0.65251	6.04137
	B->Y (FF)	A	0.11894	0.77647	6.30809
	B->Y (RF)	!A	0.11244	0.69731	6.14452

Power Information

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_xnor2_1	A	B	0.00000	0.00000	0.00000
	A	B	0.03096	0.08931	0.70845
	A	!B	0.00000	0.00000	0.00000
	A	!B	0.06120	0.13959	0.94412
	B	A	0.00000	0.00000	0.00000
	B	A	0.01295	0.07227	0.69155
	B	!A	0.00000	0.00000	0.00000
	B	!A	0.07080	0.15000	0.99318

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_12T_xnor2_1	A	B	0.00000	0.00000	0.00000
	A	B	0.07711	0.13723	0.75280
	A	!B	0.00000	0.00000	0.00000
	A	!B	0.02490	0.10128	0.90078
	B	A	0.00000	0.00000	0.00000
	B	A	0.06342	0.12474	0.74115
	B	!A	0.00000	0.00000	0.00000
	B	!A	0.03612	0.11319	0.93544

GF180MCU_OSU_SC_12T_XOR2_1

gf180mcu_12T_TT_3P3_25C.ccs
Cell Library: Process , Voltage 3.30, Temp 25.00

Truth Table

INPUT	OUTPUT
B	Y
0	1
1	0

Footprint

Cell Name	Area
gf180mcu_osu_sc_12T_xor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	B	Y
gf180mcu_osu_sc_12T_xor2_1	0.27695	1.58649

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_12T_xor2_1	0.00000	2712660.00000	2826280.00000

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_xor2_1	B->Y (FR)	0.07301	0.90663	10.30670

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_12T_xor2_1	B->Y (RF)	0.05670	0.69483	7.92387

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_xor2_1	B	0.00000	0.00000	0.00000
	B	74.26660	72.82470	59.51700

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_12T_xor2_1	B	0.00000	0.00000	0.00000
	B	-0.02883	0.63587	6.80468