gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs Library

Cell Groups
GF180MCU_OSU_SC_GP12T3V3__ADDF_1
GF180MCU_OSU_SC_GP12T3V3__ADDH_1
GF180MCU_OSU_SC_GP12T3V3__AND2_1
GF180MCU_OSU_SC_GP12T3V3__AOI21_1
GF180MCU_OSU_SC_GP12T3V3__AOI22_1
GF180MCU_OSU_SC_GP12T3V3__BUF_16
GF180MCU_OSU_SC_GP12T3V3__BUF_1
GF180MCU_OSU_SC_GP12T3V3__BUF_2
GF180MCU_OSU_SC_GP12T3V3__BUF_4
GF180MCU_OSU_SC_GP12T3V3__BUF_8
GF180MCU_OSU_SC_GP12T3V3__CLKBUF_16
GF180MCU_OSU_SC_GP12T3V3__CLKBUF_1
GF180MCU_OSU_SC_GP12T3V3__CLKBUF_2
GF180MCU_OSU_SC_GP12T3V3__CLKBUF_4
GF180MCU_OSU_SC_GP12T3V3__CLKBUF_8
GF180MCU_OSU_SC_GP12T3V3__CLKINV_16
GF180MCU_OSU_SC_GP12T3V3__CLKINV_1
GF180MCU_OSU_SC_GP12T3V3__CLKINV_2
GF180MCU_OSU_SC_GP12T3V3__CLKINV_4
GF180MCU_OSU_SC_GP12T3V3__CLKINV_8
GF180MCU_OSU_SC_GP12T3V3__DFFN_1
GF180MCU_OSU_SC_GP12T3V3__DFFRN_1
GF180MCU_OSU_SC_GP12T3V3__DFFR_1

GF180MCU_OSU_SC_GP12T3V3__DFFSN_1
GF180MCU_OSU_SC_GP12T3V3__DFFSRN_1
GF180MCU_OSU_SC_GP12T3V3__DFFSR_1
GF180MCU_OSU_SC_GP12T3V3__DFFS_1
GF180MCU_OSU_SC_GP12T3V3__DFF_1
GF180MCU_OSU_SC_GP12T3V3__DLATN_1
GF180MCU_OSU_SC_GP12T3V3__DLAT_1
GF180MCU_OSU_SC_GP12T3V3__INV_16
GF180MCU_OSU_SC_GP12T3V3__INV_1
GF180MCU_OSU_SC_GP12T3V3__INV_2
GF180MCU_OSU_SC_GP12T3V3__INV_4
GF180MCU_OSU_SC_GP12T3V3__INV_8
GF180MCU_OSU_SC_GP12T3V3__LSHIFDOWN
GF180MCU_OSU_SC_GP12T3V3__LSHIFUP
GF180MCU_OSU_SC_GP12T3V3__MUX2_1
GF180MCU_OSU_SC_GP12T3V3__NAND2_1
GF180MCU_OSU_SC_GP12T3V3__NOR2_1
GF180MCU_OSU_SC_GP12T3V3__OAI21_1
GF180MCU_OSU_SC_GP12T3V3__OAI22_1
GF180MCU_OSU_SC_GP12T3V3__OAI31_1
GF180MCU_OSU_SC_GP12T3V3__OR2_1
GF180MCU_OSU_SC_GP12T3V3__TBUF_1
GF180MCU_OSU_SC_GP12T3V3__TIEH
GF180MCU_OSU_SC_GP12T3V3__TIEL
GF180MCU_OSU_SC_GP12T3V3__TINV_1
GF180MCU_OSU_SC_GP12T3V3__XNOR2_1

GF180MCU_OSU_SC_GP12T3V3__XOR2_1

GF180MCU_OSU_SC_GP12T3V3__ADDF_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__addf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	A	B	CI	CO	S
gf180mcu_osu_sc_gp12t3v3__addf_1	0.01543	0.01457	0.01140	1.55550	1.54990

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__addf_1	A->CO (RR)	0.21566	0.84349	7.28378
	B->CO (RR)	0.22738	0.95333	7.77863
	CI->CO (RR)	0.20555	0.89075	7.27903

Delay(ns) to CO falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addf_1	A->CO (FF)	0.24819	1.00839	8.06347
	B->CO (FF)	0.23381	1.11567	8.62006
	CI->CO (FF)	0.20075	1.08728	8.30552

Delay(ns) to S rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addf_1	A->S (-R)	0.42860	1.18098	8.51167
	B->S (-R)	0.41173	1.31207	9.24794
	CI->S (-R)	0.37648	1.23088	8.80527

Delay(ns) to S falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addf_1	A->S (-F)	0.25947	1.19874	9.07279
	B->S (-F)	0.30547	1.14653	8.75645
	CI->S (-F)	0.32749	1.07291	8.32990

Power Information

Internal switching power(pJ) to CO rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addf_1	A	0.04823	0.07855	0.36336
	A	0.08805	0.11816	0.40215
	B	0.04863	0.07506	0.32916
	B	0.08932	0.11623	0.37056
	CI	0.03542	0.06535	0.28970
	CI	0.07574	0.10298	0.32645

Internal switching power(pJ) to CO falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addf_1	A	0.09970	0.12974	0.41358
	A	0.06247	0.09256	0.37677
	B	0.08157	0.10965	0.36674
	B	0.03945	0.06769	0.32534
	CI	0.07538	0.10596	0.33568
	CI	0.04221	0.07283	0.30256

Internal switching power(pJ) to S rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addf_1	A	0.02579	0.06867	0.48450
	A	0.10965	0.15315	0.56919
	B	0.03014	0.08028	0.53361
	B	0.11150	0.16115	0.61361
	CI	0.04216	0.09553	0.60594
	CI	0.11904	0.17206	0.68256

Internal switching power(pJ) to S falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addf_1	A	0.10572	0.15111	0.57081
	A	0.01876	0.06442	0.48426
	B	0.10784	0.15709	0.61211
	B	0.03094	0.08040	0.53586
	CI	0.11673	0.17066	0.68970
	CI	0.05138	0.10536	0.62457

GF180MCU_OSU_SC_GP12T3V3__ADDH_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__addh_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	A	B	CO	S
gf180mcu_osu_sc_gp12t3v3__addh_1	0.00767	0.00696	1.55628	1.55391

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__addh_1	A->CO (RR)	0.16397	0.79607	7.36131
	B->CO (RR)	0.15839	0.87023	7.77768

Delay(ns) to CO falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addh_1	A->CO (FF)	0.14168	0.89145	7.69113
	B->CO (FF)	0.12922	0.82594	7.25277

Delay(ns) to S rising (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addh_1	A->S (RR)	!B	0.17196	0.85800	7.61725
	A->S (FR)	B	0.24541	1.02322	8.21953
	B->S (RR)	!A	0.13902	0.74592	6.99760
	B->S (FR)	A	0.26313	0.97773	7.75742

Delay(ns) to S falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__addh_1	A->S (FF)	!B	0.18066	0.86750	7.50836
	A->S (RF)	B	0.25960	0.80526	6.32892
	B->S (FF)	!A	0.15681	0.94745	8.02549
	B->S (RF)	A	0.25352	0.88817	6.87189

Power Information

Internal switching power(pJ) to CO rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addh_1	A	0.04269	0.08215	0.37997
	A	0.06100	0.10040	0.39863
	B	0.04741	0.08500	0.35633
	B	0.05948	0.09694	0.36744

Internal switching power(pJ) to CO falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__addh_1	A	0.05993	0.10349	0.40474
	A	0.04161	0.08521	0.38649
	B	0.05921	0.09623	0.36742
	B	0.04794	0.08511	0.35620

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__addh_1	A	B	0.05997	0.10363	0.40495
	A	B	0.04165	0.08534	0.38660
	A	!B	0.02958	0.09166	0.56649
	A	!B	0.08175	0.14370	0.61727
	B	A	0.05926	0.09637	0.36619
	B	A	0.04799	0.08524	0.35514
	B	!A	0.02077	0.07869	0.49045
	B	!A	0.05868	0.11648	0.52826

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__addh_1	A	B	0.04265	0.08211	0.37910
	A	B	0.06096	0.10045	0.39736
	A	!B	0.07170	0.13205	0.60704
	A	!B	0.01969	0.08020	0.55544
	B	A	0.04738	0.08497	0.35523
	B	A	0.05946	0.09698	0.36673
	B	!A	0.06337	0.12189	0.53310
	B	!A	0.02488	0.08378	0.49494

GF180MCU_OSU_SC_GP12T3V3__AND2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__and2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__and2_1	0.00404	0.00402	1.54145

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__and2_1	A->Y (RR)	0.12953	0.79748	7.57945
	B->Y (RR)	0.13487	0.73533	7.19291

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__and2_1	A->Y (FF)	0.10904	0.76070	7.06634
	B->Y (FF)	0.12187	0.83184	7.52062

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__and2_1	A	0.02774	0.10210	0.60267
	A	0.05089	0.12511	0.62581
	B	0.02649	0.10502	0.66141
	B	0.05488	0.13313	0.68909

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__and2_1	A	0.04437	0.11969	0.62096
	A	0.02109	0.09663	0.60403
	B	0.05603	0.13798	0.69514
	B	0.02773	0.11003	0.66733

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__and2_1	(!B * !Y)	0.01421	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_gp12t3v3__and2_1	(!A * !Y)	-0.01352	-0.01350	-0.01352
	(!A * !Y)	0.00648	0.00645	0.00646

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__and2_1	(!A * !Y)	0.01358	0.01367	0.01355
	(!A * !Y)	-0.00640	-0.00645	-0.00646

GF180MCU_OSU_SC_GP12T3V3__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_gp12t3v3__aoi21_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A0	A1	B	Y
gf180mcu_osu_sc_gp12t3v3__aoi21_1	0.00395	0.00398	0.00405	0.78130

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__aoi21_1	A0->Y (FR)	0.13775	1.03282	8.60718
	A1->Y (FR)	0.11370	1.00190	8.52901
	B->Y (FR)	0.10367	1.19000	9.87220

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__aoi21_1	A0->Y (RF)	0.10487	0.73161	6.15213
	A1->Y (RF)	0.09845	0.88241	7.33025
	B->Y (RF)	0.04959	0.60706	5.35620

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi21_1	A0	0.04817	0.08073	0.28720
	A0	0.01025	0.04284	0.24915
	A1	0.03608	0.06716	0.25783
	A1	0.00314	0.03416	0.22455
	B	0.02633	0.07219	0.30014
	B	0.00382	0.04949	0.27768

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi21_1	A0	0.01573	0.04844	0.23767
	A0	0.05350	0.08633	0.27532
	A1	0.01624	0.04786	0.21206
	A1	0.04888	0.08065	0.24502
	B	0.00016	0.04176	0.25198
	B	0.02270	0.06441	0.27849

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi21_1	(A1 * B * !Y)	-0.01314	-0.01340	-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	-0.01353	-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_gp12t3v3__aoi21_1	(A1 * B * !Y)	0.01337	0.01340	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_gp12t3v3__aoi21_1	(B * !Y)	-0.01315	-0.01340	-0.01333
	(B * !Y)	0.00656	0.00658	0.00651
	(!A0 * !B * Y)	-0.01400	-0.01411	-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_gp12t3v3__aoi21_1	(B * !Y)	0.01337	0.01340	0.01333
	(B * !Y)	-0.00649	-0.00652	-0.00649
	(!A0 * !B * Y)	0.01425	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_gp12t3v3__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_gp12t3v3__aoi21_1	(A0 * A1 * !Y)	0.00495	0.00497	0.00463
	(A0 * A1 * !Y)	-0.00734	-0.00745	-0.00779

GF180MCU_OSU_SC_GP12T3V3__AOI22_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__aoi22_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)
	A0	A1	B0	B1	Y
gf180mcu_osu_sc_gp12t3v3__aoi22_1	0.00395	0.00398	0.00404	0.00402	0.77202

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__aoi22_1	A0->Y (FR)	0.18417	1.07291	8.57616
	A1->Y (FR)	0.16064	1.04173	8.49813
	B0->Y (FR)	0.11570	1.17098	9.65346
	B1->Y (FR)	0.13826	1.20061	9.71440

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__aoi22_1	A0->Y (RF)	0.14626	0.77704	6.18231
	A1->Y (RF)	0.13954	0.92868	7.35755
	B0->Y (RF)	0.07715	0.84600	7.25666
	B1->Y (RF)	0.08236	0.69799	6.07316

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi22_1	A0	0.05793	0.09031	0.30180
	A0	0.01027	0.04255	0.25415
	A1	0.04588	0.07620	0.27119
	A1	0.00329	0.03354	0.22854
	B0	0.02818	0.06399	0.24370
	B0	0.00437	0.03994	0.21941
	B1	0.03960	0.07789	0.27062
	B1	0.01081	0.04885	0.24150

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi22_1	A0	0.03100	0.06561	0.27357
	A0	0.07850	0.11294	0.32086
	A1	0.03150	0.06403	0.24727
	A1	0.07380	0.10635	0.28950
	B0	0.00678	0.04052	0.21440
	B0	0.03051	0.06457	0.24098
	B1	0.00564	0.04136	0.23691
	B1	0.03452	0.07060	0.26575

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__aoi22_1	(A1 * B0 * B1 * !Y)	-0.01304	-0.01333	-0.01331
	(A1 * B0 * B1 * !Y)	0.00654	0.00658	0.00651
	(!A1 * B0 * B1 * !Y)	-0.01351	-0.01355	-0.01352
	(!A1 * B0 * B1 * !Y)	0.00647	0.00648	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)	-0.01354	-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_gp12t3v3__aoi22_1	(A1 * B0 * B1 * !Y)	0.01334	0.01333	0.01331
	(A1 * B0 * B1 * !Y)	-0.00649	-0.00649	-0.00649
	(!A1 * B0 * B1 * !Y)	0.01358	0.01367	0.01355
	(!A1 * B0 * B1 * !Y)	-0.00639	-0.00648	-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_gp12t3v3__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_gp12t3v3__aoi22_1	(B0 * B1 * !Y)	0.01336	0.01337	0.01331
	(B0 * B1 * !Y)	-0.00650	-0.00651	-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_gp12t3v3__aoi22_1	(A0 * A1 * !Y)	-0.00456	-0.00456	-0.00451
	(A0 * A1 * !Y)	0.00781	0.00786	0.00780
	(!A1 * !B1 * Y)	-0.01408	-0.01404	-0.01414
	(!A1 * !B1 * Y)	0.00189	0.00187	0.00178
	(!A0 * A1 * !B1 * Y)	-0.01407	-0.01404	-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_gp12t3v3__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)	0.01422	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_gp12t3v3__aoi22_1	(A0 * A1 * !Y)	-0.00453	-0.00456	-0.00451
	(A0 * A1 * !Y)	0.00781	0.00786	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_gp12t3v3__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_GP12T3V3__BUF_16

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__buf_16	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__buf_16	0.00404	24.76458

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__buf_16	**A->Y (RR)**	0.34004	0.85403	7.91931

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__buf_16	**A->Y (FF)**	0.36668	1.02880	8.58067

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_16	A	0.70748	0.70778	1.14193
	A	0.72933	0.72856	1.14522

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_16	A	0.79253	0.73934	1.13824
	A	0.77066	0.72107	1.11906

GF180MCU_OSU_SC_GP12T3V3__BUF_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__buf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__buf_1	0.00405	1.55566

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__buf_1	A->Y (RR)	0.09140	0.65432	6.93348

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__buf_1	A->Y (FF)	0.09984	0.79709	7.59185

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_1	A	0.02023	0.10952	0.69832
	A	0.04213	0.13131	0.72018

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_1	A	0.04239	0.13458	0.72073
	A	0.02052	0.11296	0.69903

GF180MCU_OSU_SC_GP12T3V3__BUF_2

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__buf_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__buf_2	0.00405	3.10294

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__buf_2	A->Y (RR)	0.10476	0.58476	7.01509

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__buf_2	A->Y (FF)	0.11407	0.74081	7.67275

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_2	A	0.04215	0.13166	0.71774
	A	0.06410	0.15322	0.73960

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_2	A	0.06402	0.15549	0.73814
	A	0.04200	0.13395	0.71640

GF180MCU_OSU_SC_GP12T3V3__BUF_4

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__buf_4	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__buf_4	0.00404	6.15334

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__buf_4	A->Y (RR)	0.13726	0.58402	7.13109

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__buf_4	A->Y (FF)	0.14869	0.74923	7.79491

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_4	A	0.09275	0.18305	0.76428
	A	0.11474	0.20473	0.78373

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_4	A	0.11680	0.20637	0.78112
	A	0.09466	0.18459	0.76264

GF180MCU_OSU_SC_GP12T3V3__BUF_8

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__buf_8	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__buf_8	0.00404	12.28096

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__buf_8	A->Y (RR)	0.20467	0.66717	7.39814

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__buf_8	A->Y (FF)	0.22110	0.84085	8.06740

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_8	A	0.23719	0.32286	0.87603
	A	0.25916	0.34426	0.88880

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__buf_8	A	0.27092	0.33967	0.87944
	A	0.24891	0.31787	0.86069

GF180MCU_OSU_SC_GP12T3V3__CLKBUF_16

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkbuf_16	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkbuf_16	0.00404	24.76458

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkbuf_16	A->Y (RR)	0.34004	0.85403	7.91931

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkbuf_16	A->Y (FF)	0.36668	1.02880	8.58067

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_16	A	0.70748	0.70778	1.14193
	A	0.72933	0.72856	1.14522

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_16	A	0.79253	0.73934	1.13824
	A	0.77066	0.72107	1.11906

GF180MCU_OSU_SC_GP12T3V3__CLKBUF_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkbuf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkbuf_1	0.00405	1.55566

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkbuf_1	A->Y (RR)	0.09140	0.65432	6.93348

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkbuf_1	A->Y (FF)	0.09984	0.79709	7.59185

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_1	A	0.02023	0.10952	0.69832
	A	0.04213	0.13131	0.72018

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_1	A	0.04239	0.13458	0.72073
	A	0.02052	0.11296	0.69903

GF180MCU_OSU_SC_GP12T3V3__CLKBUF_2

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkbuf_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkbuf_2	0.00405	3.10294

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkbuf_2	A->Y (RR)	0.10476	0.58476	7.01509

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkbuf_2	A->Y (FF)	0.11407	0.74081	7.67275

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_2	A	0.04215	0.13166	0.71774
	A	0.06410	0.15322	0.73960

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_2	A	0.06402	0.15549	0.73814
	A	0.04200	0.13395	0.71640

GF180MCU_OSU_SC_GP12T3V3__CLKBUF_4

Truth Table

INPUT	OUTPUT
A	Y
0	0
1	1

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__clkbuf_4	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkbuf_4	0.00404	6.15334

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkbuf_4	A->Y (RR)	0.13726	0.58402	7.13109

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkbuf_4	A->Y (FF)	0.14869	0.74923	7.79491

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_4	A	0.09275	0.18305	0.76428
	A	0.11474	0.20473	0.78373

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_4	A	0.11680	0.20637	0.78112
	A	0.09466	0.18459	0.76264

GF180MCU_OSU_SC_GP12T3V3__CLKBUF_8

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkbuf_8	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkbuf_8	0.00404	12.28096

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkbuf_8	A->Y (RR)	0.20467	0.66717	7.39814

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkbuf_8	A->Y (FF)	0.22110	0.84085	8.06740

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_8	A	0.23719	0.32286	0.87603
	A	0.25916	0.34426	0.88880

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkbuf_8	A	0.27092	0.33967	0.87944
	A	0.24891	0.31787	0.86069

GF180MCU_OSU_SC_GP12T3V3__CLKINV_16

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkinv_16	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkinv_16	0.06465	23.88324

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkinv_16	A->Y (FR)	0.03946	0.57439	9.96324

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkinv_16	A->Y (RF)	0.03067	0.37350	8.47819

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_16	A	0.35872	1.40518	4.08756
	A	0.00972	1.05367	3.73664

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_16	A	-0.00697	0.98712	3.38277
	A	0.34267	1.33843	3.73611

GF180MCU_OSU_SC_GP12T3V3__CLKINV_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkinv_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkinv_1	0.00404	1.50748

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkinv_1	A->Y (FR)	0.05308	1.00903	10.02570

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkinv_1	A->Y (RF)	0.04429	0.80913	8.53517

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_1	A	0.02213	0.06829	0.25366
	A	0.00031	0.04603	0.23179

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_1	A	-0.00058	0.04163	0.21052
	A	0.02130	0.06381	0.23249

GF180MCU_OSU_SC_GP12T3V3__CLKINV_2

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkinv_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkinv_2	0.00808	2.98498

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkinv_2	A->Y (FR)	0.04616	0.86640	9.96233

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkinv_2	A->Y (RF)	0.03743	0.66628	8.47738

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_2	A	0.04450	0.14727	0.51097
	A	0.00084	0.10301	0.46711

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_2	A	-0.00100	0.09404	0.42288
	A	0.04262	0.13830	0.46704

GF180MCU_OSU_SC_GP12T3V3__CLKINV_4

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkinv_4	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkinv_4	0.01616	5.97048

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkinv_4	A->Y (FR)	0.04243	0.75120	9.96289

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkinv_4	A->Y (RF)	0.03365	0.55082	8.47788

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_4	A	0.08964	0.31487	1.02191
	A	0.00196	0.22740	0.93418

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_4	A	-0.00200	0.20985	0.84572
	A	0.08550	0.29770	0.93405

GF180MCU_OSU_SC_GP12T3V3__CLKINV_8

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__clkinv_8	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__clkinv_8	0.03231	11.94140

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__clkinv_8	A->Y (FR)	0.04045	0.65542	9.96313

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__clkinv_8	A->Y (RF)	0.03169	0.45371	8.47809

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_8	A	0.17947	0.66856	2.04380
	A	0.00444	0.49364	1.86833

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__clkinv_8	A	-0.00379	0.45591	1.69140
	A	0.17139	0.63123	1.86807

GF180MCU_OSU_SC_GP12T3V3__DFFN_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

INPUT		OUTPUT	
D	CLK	Q	QN
0	F	0	1
1	F	1	0
x	x	IQ	IQN

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dffn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	D	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffn_1	0.00393	0.00405	1.55346	1.56080

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffn_1	0.00000	0.00670	0.00720

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK->Q (FR)	0.37881	1.86869	17.95310
	QN->Q (FR)	0.05308	1.01908	10.22050

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK->Q (FF)	0.45945	1.91385	17.66500
	QN->Q (RF)	0.04429	0.81750	8.70942

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK->QN (FR)	0.41615	1.19334	8.44575

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK->QN (FF)	0.33152	1.07084	7.71483

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	hold	CLK (F)	-0.01532	0.13440	2.01273
	setup	CLK (F)	0.01637	-0.14090	-2.01917

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	hold	CLK (F)	-0.13076	-0.17558	-0.85050
	setup	CLK (F)	0.14013	0.19076	0.87855

Constraints(ns) for CLK rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	min_pulse_width	CLK ()	0.16449	1.46484	16.50020
	min_pulse_width	CLK ()	0.17492	1.46484	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_gp12t3v3__dffn_1	min_pulse_width	CLK ()	0.18273	1.46484	16.50020
	min_pulse_width	CLK ()	0.19837	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK	0.08883	0.14688	0.56027
	CLK	0.07781	0.13591	0.55157

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK	0.09077	0.14552	0.54613
	CLK	0.07983	0.13462	0.53465

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK	0.09080	0.14567	0.54412
	CLK	0.07986	0.13468	0.53285

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	CLK	0.08875	0.14666	0.55546
	CLK	0.07773	0.13586	0.54614

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	(CLK * Q * !QN) + (CLK * !Q * QN)	0.05984	0.13630	0.71350
	(CLK * Q * !QN) + (CLK * !Q * QN)	0.08134	0.15766	0.73486
	!CLK	-0.01337	-0.01347	-0.01345
	!CLK	0.00655	0.00649	0.00648

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	(CLK * Q * !QN) + (CLK * !Q * QN)	0.09186	0.16928	0.74738
	(CLK * Q * !QN) + (CLK * !Q * QN)	0.07037	0.14782	0.72595
	!CLK	0.01337	0.01361	0.01345
	!CLK	-0.00641	-0.00649	-0.00648

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	(D * Q * !QN)	0.04588	0.13762	0.76361
	(D * Q * !QN)	0.06791	0.15977	0.78563
	(D * !Q * QN)	0.12291	0.21636	0.83745
	(D * !Q * QN)	0.14584	0.23935	0.86039
	(!D * Q * !QN)	0.11972	0.21905	0.88437
	(!D * Q * !QN)	0.14109	0.24039	0.90580
	(!D * !Q * QN)	0.05255	0.14543	0.77131
	(!D * !Q * QN)	0.07440	0.16742	0.79321

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffn_1	(D * Q * !QN)	0.06836	0.16323	0.78851
	(D * Q * !QN)	0.04626	0.14104	0.76653
	(!D * !Q * QN)	0.07494	0.16827	0.79394
	(!D * !Q * QN)	0.05296	0.14638	0.77210

GF180MCU_OSU_SC_GP12T3V3__DFFRN_1

Truth Table

INPUT			OUTPUT	
D	RN	CLK	Q	QN
0	1	F	0	1
1	1	F	1	0
x	0	x	0	1
x	1	x	IQ	IQN

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dffrn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	D	RN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffrn_1	0.00393	0.00405	0.00405	1.54011	1.55917

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffrn_1	0.00000	0.00778	0.00915

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK->Q (FR)	0.46296	1.95968	17.89800
	QN->Q (FR)	0.05308	1.01619	10.16390

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK->Q (FF)	0.49186	1.94010	17.56020
	QN->Q (RF)	0.04429	0.81513	8.65847
	RN->Q (FF)	0.26020	1.70184	17.30230

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK->QN (FR)	0.44844	1.22613	8.47212
	RN->QN (FR)	0.21674	0.98796	8.21539

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK->QN (FF)	0.41234	1.16781	7.79383

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	hold	CLK (F)	-0.04733	0.09971	1.91624
	setup	CLK (F)	0.04777	-0.10622	-1.93086

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	hold	CLK (F)	-0.14529	-0.18425	-0.85338
	setup	CLK (F)	0.15560	0.19726	0.88127

Constraints(ns) for D rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	hold	CLK (F)	-0.04733	0.09971	1.91624
	setup	CLK (F)	0.04777	-0.10622	-1.93086

Constraints(ns) for D falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	hold	CLK (F)	-0.14529	-0.18425	-0.85338
	setup	CLK (F)	0.15560	0.19726	0.88127

Constraints(ns) for RN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	recovery	CLK (F)	-0.07118	-0.20376	-1.44529
	removal	CLK (F)	0.08627	0.20810	1.45019

Constraints(ns) for RN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	recovery	CLK (F)	-0.07118	-0.20376	-1.44529
	removal	CLK (F)	0.08627	0.20810	1.45019

Constraints(ns) for RN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	min_pulse_width	RN ()	0.15928	1.46484	16.50020
	min_pulse_width	RN ()	0.15928	1.46484	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_gp12t3v3__dffrn_1	min_pulse_width	CLK ()	0.19055	1.46484	16.50020
	min_pulse_width	CLK ()	0.18534	1.46484	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_gp12t3v3__dffrn_1	min_pulse_width	CLK ()	0.20358	1.46484	16.50020
	min_pulse_width	CLK ()	0.21401	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK	0.09632	0.15232	0.56334
	CLK	0.08530	0.14141	0.55417

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK	0.09663	0.15102	0.55162
	CLK	0.08569	0.13978	0.53944
	RN	0.11085	0.16726	0.58330
	RN	0.09984	0.15594	0.57237

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK	0.09661	0.15087	0.54962
	CLK	0.08567	0.13996	0.53823
	RN	0.11083	0.16731	0.58092
	RN	0.09982	0.15612	0.56961

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	CLK	0.09625	0.15228	0.55947
	CLK	0.08523	0.14144	0.54990

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(CLK * RN * Q * !QN) + (CLK * RN * !Q * QN)	0.07153	0.14190	0.70933
	(CLK * RN * Q * !QN) + (CLK * RN * !Q * QN)	0.09303	0.16344	0.73070
	(CLK * !RN * !Q * QN)	0.03722	0.10183	0.62223
	(CLK * !RN * !Q * QN)	0.05873	0.12326	0.64360
	!CLK	-0.01337	-0.01347	-0.01345
	!CLK	0.00655	0.00649	0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(CLK * RN * Q * !QN) + (CLK * RN * !Q * QN)	0.10245	0.17631	0.74726
	(CLK * RN * Q * !QN) + (CLK * RN * !Q * QN)	0.08095	0.15486	0.72585
	(CLK * !RN * !Q * QN)	0.04837	0.11377	0.63635
	(CLK * !RN * !Q * QN)	0.02698	0.09231	0.61491
	!CLK	0.01337	0.01361	0.01345
	!CLK	-0.00641	-0.00649	-0.00648

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(CLK * D * !Q * QN)	0.04290	0.13173	0.74160
	(CLK * D * !Q * QN)	0.06484	0.15375	0.76353
	(CLK * !D * !Q * QN) + (!CLK * !Q * QN)	0.00930	0.09373	0.67560
	(CLK * !D * !Q * QN) + (!CLK * !Q * QN)	0.03124	0.11563	0.69756

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(CLK * D * !Q * QN)	0.07901	0.17086	0.78482
	(CLK * D * !Q * QN)	0.05705	0.14888	0.76286
	(CLK * !D * !Q * QN) + (!CLK * !Q * QN)	0.03765	0.12540	0.70804
	(CLK * !D * !Q * QN) + (!CLK * !Q * QN)	0.01562	0.10333	0.68610

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(D * RN * Q * !QN)	0.04588	0.13762	0.76361
	(D * RN * Q * !QN)	0.06791	0.15977	0.78562
	(D * RN * !Q * QN)	0.13460	0.22840	0.84854
	(D * RN * !Q * QN)	0.15753	0.25136	0.87158
	(D * !RN * !Q * QN)	0.09285	0.18886	0.81595
	(D * !RN * !Q * QN)	0.11492	0.21107	0.83795
	(!D * RN * Q * !QN)	0.13041	0.22920	0.89157
	(!D * RN * Q * !QN)	0.15178	0.25059	0.91299
	(!D * !Q * QN)	0.05255	0.14544	0.77131
	(!D * !Q * QN)	0.07440	0.16742	0.79321

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffrn_1	(D * RN * Q * !QN)	0.06837	0.16323	0.78852
	(D * RN * Q * !QN)	0.04626	0.14104	0.76655
	(D * !RN * !Q * QN)	0.10213	0.19677	0.81917
	(D * !RN * !Q * QN)	0.08003	0.17459	0.79710
	(!D * !Q * QN)	0.07494	0.16827	0.79395
	(!D * !Q * QN)	0.05296	0.14638	0.77210

GF180MCU_OSU_SC_GP12T3V3__DFFR_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

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

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dffr_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	D	RN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffr_1	0.00393	0.00405	0.01039	1.55894	1.56019

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffr_1	0.00000	0.00703	0.00851

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK->Q (RR)	0.37036	1.68656	16.55320
	QN->Q (FR)	0.05308	1.02024	10.24350

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK->Q (RF)	0.40524	1.65954	16.30410
	QN->Q (RF)	0.04429	0.81919	8.73055
	RN->Q (FF)	0.26020	1.71061	17.49680

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK->QN (RR)	0.36187	0.93658	7.02756
	RN->QN (FR)	0.21674	0.98816	8.21992

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK->QN (RF)	0.31974	0.88674	6.26208

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	hold	CLK (R)	-0.13972	-0.11922	0.53545
	setup	CLK (R)	0.15149	0.13006	0.12650

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	hold	CLK (R)	-0.22739	-0.61563	-5.10394
	setup	CLK (R)	0.23173	0.61779	5.13599

Constraints(ns) for D rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	hold	CLK (R)	-0.13972	-0.11922	0.53545
	setup	CLK (R)	0.15149	0.13006	0.12650

Constraints(ns) for D falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	hold	CLK (R)	-0.22739	-0.61563	-5.10394
	setup	CLK (R)	0.23173	0.61779	5.13599

Constraints(ns) for RN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	recovery	CLK (R)	0.03674	0.03068	1.06133
	removal	CLK (R)	-0.00234	-0.00434	-0.02838

Constraints(ns) for RN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	recovery	CLK (R)	0.03674	0.03068	1.06133
	removal	CLK (R)	-0.00234	-0.00434	-0.02838

Constraints(ns) for RN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	min_pulse_width	RN ()	0.15928	1.46484	16.50020
	min_pulse_width	RN ()	0.15928	1.46484	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_gp12t3v3__dffr_1	min_pulse_width	CLK ()	0.17752	1.46484	16.50020
	min_pulse_width	CLK ()	0.19837	1.46484	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_gp12t3v3__dffr_1	min_pulse_width	CLK ()	0.21661	1.46484	16.50020
	min_pulse_width	CLK ()	0.19055	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	0.05716	0.13563	0.64711
	CLK	0.08525	0.16429	0.67743

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	0.06433	0.11469	0.50843
	CLK	0.08582	0.13601	0.52817
	RN	0.11744	0.17388	0.59150
	RN	0.09985	0.15600	0.57349

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	0.06431	0.11464	0.50674
	CLK	0.08581	0.13595	0.52806
	RN	0.11742	0.17381	0.58757
	RN	0.09983	0.15621	0.56967

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	0.05709	0.13576	0.64430
	CLK	0.08518	0.16398	0.67463

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	-0.01322	-0.01338	-0.01335
	CLK	0.00655	0.00648	0.00649
	(!CLK * RN * Q * !QN) + (!CLK * RN * !Q * QN)	0.07154	0.14164	0.70925
	(!CLK * RN * Q * !QN) + (!CLK * RN * !Q * QN)	0.10310	0.17334	0.74064
	(!CLK * !RN * !Q * QN)	0.03722	0.10156	0.62219
	(!CLK * !RN * !Q * QN)	0.06894	0.13329	0.65365

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	CLK	0.01326	0.01350	0.01335
	CLK	-0.00640	-0.00648	-0.00648
	(!CLK * RN * Q * !QN) + (!CLK * RN * !Q * QN)	0.10243	0.17612	0.74669
	(!CLK * RN * Q * !QN) + (!CLK * RN * !Q * QN)	0.07083	0.14450	0.71519
	(!CLK * !RN * !Q * QN)	0.04835	0.11381	0.63628
	(!CLK * !RN * !Q * QN)	0.01679	0.08219	0.60475

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	(CLK * !Q * QN) + (!CLK * !D * !Q * QN)	0.00929	0.09372	0.67560
	(CLK * !Q * QN) + (!CLK * !D * !Q * QN)	0.03123	0.11563	0.69756
	(!CLK * D * !Q * QN)	0.04290	0.13172	0.74159
	(!CLK * D * !Q * QN)	0.06475	0.15366	0.76344

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	(CLK * !Q * QN) + (!CLK * !D * !Q * QN)	0.03765	0.12540	0.70804
	(CLK * !Q * QN) + (!CLK * !D * !Q * QN)	0.01562	0.10333	0.68610
	(!CLK * D * !Q * QN)	0.07901	0.17086	0.78483
	(!CLK * D * !Q * QN)	0.05715	0.14896	0.76292

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	(D * RN * Q * !QN)	-0.00019	0.08469	0.66646
	(D * RN * Q * !QN)	0.04668	0.13150	0.71314
	(D * !RN * !Q * QN)	0.03585	0.12487	0.73390
	(D * !RN * !Q * QN)	0.08035	0.16922	0.77664
	(!D * !Q * QN)	-0.00080	0.08503	0.66610
	(!D * !Q * QN)	0.05315	0.13881	0.71997

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffr_1	(D * RN * Q * !QN)	0.04734	0.13564	0.71738
	(D * RN * Q * !QN)	0.00051	0.08897	0.67051
	(D * RN * !Q * QN)	0.13601	0.22545	0.99368
	(D * RN * !Q * QN)	0.09423	0.18365	0.95135
	(D * !RN * !Q * QN)	0.09419	0.18936	0.79682
	(D * !RN * !Q * QN)	0.04960	0.14516	0.75322
	(!D * RN * Q * !QN)	0.13168	0.28368	1.17200
	(!D * RN * Q * !QN)	0.07497	0.22652	1.11486
	(!D * !Q * QN)	0.05380	0.13969	0.72024
	(!D * !Q * QN)	-0.00030	0.08545	0.66631

GF180MCU_OSU_SC_GP12T3V3__DFFSN_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

INPUT			OUTPUT	
D	SN	CLK	Q	QN
x	x	x	1	1

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dffsn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	D	SN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffsn_1	0.00394	2.10339	0.00406	1.75019	1.75019

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffsn_1	0.00000	922916.00000	2599040.00000

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	QN->Q (FR)	0.05308	1.06011	11.06570

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	QN->Q (RF)	0.04429	0.85850	9.46589

Constraint Information

Constraints(ns) for SN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	**min_pulse_width**	**SN ()**	2.59773	2.55232	16.50020

Passive Power Information

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(CLK * SN)	0.03103	0.09566	0.61574
	(CLK * SN)	0.14401	0.70148	4.07730
	(CLK * !SN)	22.50510	21.78250	17.63910
	(CLK * !SN)	0.05678	0.12153	0.64178
	!CLK	-0.01335	-0.01351	-0.01345
	!CLK	0.00661	0.00652	0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(CLK * SN)	0.05447	0.12011	0.64267
	(CLK * SN)	7.62536	7.08902	4.00141
	(CLK * !SN)	11.48160	12.33530	17.61990
	(CLK * !SN)	0.02687	0.09255	0.61576
	!CLK	0.01361	0.01361	0.01345
	!CLK	-0.00643	-0.00652	-0.00647

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(CLK * Q * !QN)	0.02582	1.56919	11.28670
	(CLK * Q * !QN)	0.02498	0.02479	0.02451
	(CLK * !Q * QN)	0.02548	1.56851	11.28640
	(CLK * !Q * QN)	0.02858	0.02860	0.02819
	(!CLK * Q * !QN)	0.11029	1.01022	7.46253
	(!CLK * Q * !QN)	0.23381	0.41519	1.73510
	(!CLK * !Q * QN)	0.05741	0.93228	7.29836
	(!CLK * !Q * QN)	0.18205	0.33331	1.57251

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(CLK * Q * !QN)	22.60730	21.20330	12.37990
	(CLK * Q * !QN)	-0.02433	-0.02460	-0.02439
	(CLK * !Q * QN)	22.60780	21.20320	12.37960
	(CLK * !Q * QN)	-0.02719	-0.02860	-0.02819
	(!CLK * Q * !QN)	11.49200	11.22020	8.37398
	(!CLK * Q * !QN)	0.04569	0.36635	1.46751
	(!CLK * !Q * QN)	11.49460	11.03830	8.29449
	(!CLK * !Q * QN)	0.04354	0.18012	1.38155

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(D * SN * Q * !QN)	0.04600	0.13776	0.76375
	(D * SN * Q * !QN)	0.06784	0.15969	0.78555
	(D * SN * !Q * QN)	0.06739	0.16615	0.82661
	(D * SN * !Q * QN)	0.08893	0.18792	0.84816
	(D * !SN * Q * !QN)	22.52840	21.81970	17.94870
	(D * !SN * Q * !QN)	0.15440	0.25413	0.88577
	(D * !SN * !Q * QN)	22.48890	21.77580	17.90750
	(D * !SN * !Q * QN)	0.11305	0.20923	0.83542
	(!D * SN * Q * !QN)	0.07405	0.17280	0.83335
	(!D * SN * Q * !QN)	7.68082	7.23277	4.83296
	(!D * SN * !Q * QN)	0.09552	0.20194	0.90161
	(!D * SN * !Q * QN)	7.70059	7.25643	4.88625
	(!D * !SN * Q * !QN)	11.40500	11.50100	12.12730
	(!D * !SN * Q * !QN)	0.11506	0.21123	0.83740
	(!D * !SN * !Q * QN)	11.36440	11.45770	12.08310
	(!D * !SN * !Q * QN)	0.07446	0.16775	0.79327

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsn_1	(D * SN * Q * !QN)	0.06815	0.16302	0.78829
	(D * SN * Q * !QN)	0.04632	0.14109	0.76660
	(D * SN * !Q * QN)	0.10358	0.20503	0.86491
	(D * SN * !Q * QN)	0.08200	0.18336	0.84350
	(D * !SN * Q * !QN)	11.62220	12.63430	18.45950
	(D * !SN * Q * !QN)	0.10732	0.20590	0.82731
	(D * !SN * !Q * QN)	11.59690	12.60990	18.43900
	(D * !SN * !Q * QN)	0.08000	0.17627	0.79680
	(!D * SN * Q * !QN)	0.09691	0.19905	0.85863
	(!D * SN * Q * !QN)	0.19132	0.91412	5.11536
	(!D * SN * !Q * QN)	0.13277	0.24306	0.94059
	(!D * SN * !Q * QN)	0.23047	0.96670	5.22055
	(!D * !SN * Q * !QN)	11.41400	11.51040	12.13090
	(!D * !SN * Q * !QN)	0.07997	0.17630	0.79685
	(!D * !SN * !Q * QN)	11.38690	11.48140	12.10600
	(!D * !SN * !Q * QN)	0.05287	0.14750	0.77214

GF180MCU_OSU_SC_GP12T3V3__DFFSRN_1

gf180mcu_osu_sc_gp12t3v3_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	F	0	1
1	1	1	F	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_gp12t3v3__dffsrn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)	
	D	RN	SN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	0.00394	0.00405	0.00802	0.00405	1.56095	1.55977

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	0.00000	0.00783	0.00921

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK->Q (FR)	0.50227	2.01176	18.15720
	QN->Q (FR)	0.05308	1.02088	10.25260
	RN->Q (RR)	0.30497	1.61712	16.60920
	SN->Q (FR)	0.28758	1.71769	17.46300

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK->Q (FF)	0.55220	2.02157	17.84760
	QN->Q (RF)	0.04429	0.81959	8.73830
	RN->Q (FF)	0.27006	1.72633	17.54040

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK->QN (FR)	0.50824	1.29677	8.54577
	RN->QN (FR)	0.22735	1.00276	8.24096

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK->QN (FF)	0.45082	1.20988	7.83513
	RN->QN (RF)	0.25416	0.81667	6.29255
	SN->QN (FF)	0.23693	0.91678	7.14038

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	hold	CLK (F)	-0.06409	0.08237	1.89074
	setup	CLK (F)	0.07028	-0.08888	-1.89665

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	hold	CLK (F)	-0.16252	-0.19076	-0.87526
	setup	CLK (F)	0.17133	0.20593	0.90370

Constraints(ns) for D rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	hold	CLK (F)	-0.06409	0.08237	1.89074
	setup	CLK (F)	0.07028	-0.08888	-1.89665

Constraints(ns) for D falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	hold	CLK (F)	-0.16252	-0.19076	-0.87526
	setup	CLK (F)	0.17133	0.20593	0.90370

Constraints(ns) for RN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	recovery	CLK (F)	-0.05520	-0.18642	-1.42176
	removal	CLK (F)	0.07030	0.19076	1.42666
	hold	SN (R)	-0.21711	-0.42270	-0.83002
	setup	SN (R)	0.24903	0.44004	3.39723

Constraints(ns) for RN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	recovery	CLK (F)	-0.05520	-0.18642	-1.42176
	removal	CLK (F)	0.07030	0.19076	1.42666
	hold	SN (R)	-0.21711	-0.42487	-0.83093
	hold	SN (R)	-0.21755	-0.42270	-0.83002
	setup	SN (R)	0.24903	0.44004	3.39723
	setup	SN (R)	0.24632	0.43754	3.28548

Constraints(ns) for RN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	min_pulse_width	RN ()	0.16710	1.46484	16.50020
	min_pulse_width	RN ()	0.16710	1.46484	16.50020

Constraints(ns) for SN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	recovery	CLK (F)	-0.04781	-0.13223	-0.90820
	removal	CLK (F)	0.05181	0.13440	0.91302

Constraints(ns) for SN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	recovery	CLK (F)	-0.04781	-0.13223	-0.90820
	removal	CLK (F)	0.05181	0.13440	0.91302

Constraints(ns) for SN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	min_pulse_width	SN ()	0.22964	1.46484	16.50020
	min_pulse_width	SN ()	0.22964	1.46484	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_gp12t3v3__dffsrn_1	min_pulse_width	CLK ()	0.20879	1.46484	16.50020
	min_pulse_width	CLK ()	0.20619	1.46484	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_gp12t3v3__dffsrn_1	min_pulse_width	CLK ()	0.22182	1.46484	16.50020
	min_pulse_width	CLK ()	0.23485	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK	0.10376	0.15910	0.56953
	CLK	0.08969	0.14507	0.55681
	RN	0.11139	0.16400	0.56679
	RN	0.12180	0.17434	0.57932
	SN	0.09524	0.15765	0.62243
	SN	0.07356	0.13626	0.60174

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK	0.09993	0.15298	0.55445
	CLK	0.09202	0.14512	0.54578
	RN	0.10983	0.16773	0.58761
	RN	0.10514	0.16133	0.57749

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK	0.09989	0.15287	0.55086
	CLK	0.09198	0.14487	0.54263
	RN	0.10980	0.16757	0.58386
	RN	0.10510	0.16128	0.57396

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	CLK	0.10366	0.15884	0.56403
	CLK	0.08960	0.14482	0.55123
	RN	0.11130	0.16383	0.56277
	RN	0.12170	0.17452	0.57349
	SN	0.09519	0.15763	0.61962
	SN	0.07351	0.13615	0.59837

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * RN * SN * Q * !QN) + (CLK * RN * SN * !Q * QN)	0.08456	0.15285	0.71646
	(CLK * RN * SN * Q * !QN) + (CLK * RN * SN * !Q * QN)	0.10006	0.16823	0.73189
	(CLK * RN * !SN * Q * !QN)	0.03736	0.10176	0.62205
	(CLK * RN * !SN * Q * !QN)	0.05890	0.12330	0.64346
	(CLK * !RN * SN * !Q * QN)	0.03715	0.10156	0.62216
	(CLK * !RN * SN * !Q * QN)	0.05875	0.12319	0.64362
	(CLK * !RN * !SN * !Q * QN)	0.03736	0.10176	0.62205
	(CLK * !RN * !SN * !Q * QN)	0.05890	0.12330	0.64346
	!CLK	-0.01337	-0.01347	-0.01345
	!CLK	0.00655	0.00649	0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * RN * SN * Q * !QN) + (CLK * RN * SN * !Q * QN)	0.10617	0.17679	0.74246
	(CLK * RN * SN * Q * !QN) + (CLK * RN * SN * !Q * QN)	0.09068	0.16128	0.72711
	(CLK * RN * !SN * Q * !QN)	0.04835	0.11387	0.63649
	(CLK * RN * !SN * Q * !QN)	0.02692	0.09239	0.61503
	(CLK * !RN * SN * !Q * QN)	0.04847	0.11385	0.63638
	(CLK * !RN * SN * !Q * QN)	0.02698	0.09232	0.61491
	(CLK * !RN * !SN * !Q * QN)	0.04834	0.11388	0.63649
	(CLK * !RN * !SN * !Q * QN)	0.02692	0.09247	0.61503
	!CLK	0.01337	0.01361	0.01345
	!CLK	-0.00640	-0.00649	-0.00648

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * D * SN * !Q * QN)	0.05549	0.14395	0.75219
	(CLK * D * SN * !Q * QN)	0.07241	0.16101	0.76919
	(CLK * !D * SN * !Q * QN) + (!CLK * SN * !Q * QN)	0.00948	0.09388	0.67565
	(CLK * !D * SN * !Q * QN) + (!CLK * SN * !Q * QN)	0.03162	0.11599	0.69779

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * D * SN * !Q * QN)	0.07905	0.17092	0.78404
	(CLK * D * SN * !Q * QN)	0.06208	0.15381	0.76711
	(CLK * !D * SN * !Q * QN) + (!CLK * SN * !Q * QN)	0.03779	0.12552	0.70816
	(CLK * !D * SN * !Q * QN) + (!CLK * SN * !Q * QN)	0.01562	0.10331	0.68608

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * D * RN * Q * !QN) + (!CLK * RN * Q * !QN)	-0.02794	-0.02824	-0.02827
	(CLK * D * RN * Q * !QN) + (!CLK * RN * Q * !QN)	0.00387	0.00390	0.00366
	(CLK * !D * RN * Q * !QN)	0.02957	0.08838	0.55614
	(CLK * !D * RN * Q * !QN)	0.06705	0.12609	0.59358
	(!RN * !Q * QN)	-0.02693	-0.02706	-0.02701
	(!RN * !Q * QN)	0.01299	0.01300	0.01299

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(CLK * D * RN * Q * !QN) + (!CLK * RN * Q * !QN)	0.02847	0.02860	0.02836
	(CLK * D * RN * Q * !QN) + (!CLK * RN * Q * !QN)	-0.00361	-0.00364	-0.00359
	(CLK * !D * RN * Q * !QN)	0.06259	0.11885	0.58926
	(CLK * !D * RN * Q * !QN)	0.02497	0.08115	0.55167
	(!RN * !Q * QN)	0.02727	0.02736	0.02704
	(!RN * !Q * QN)	-0.01294	-0.01300	-0.01297

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(D * RN * SN * !Q * QN)	0.14779	0.24098	0.86146
	(D * RN * SN * !Q * QN)	0.16463	0.25787	0.87816
	(D * RN * Q * !QN)	0.04588	0.13762	0.76361
	(D * RN * Q * !QN)	0.06791	0.15977	0.78562
	(D * !RN * SN * !Q * QN)	0.09277	0.18880	0.81563
	(D * !RN * SN * !Q * QN)	0.11494	0.21108	0.83772
	(D * !RN * !SN * !Q * QN)	0.09300	0.18919	0.81542
	(D * !RN * !SN * !Q * QN)	0.11511	0.21129	0.83747
	(!D * RN * SN * Q * !QN)	0.13408	0.23273	0.89346
	(!D * RN * SN * Q * !QN)	0.16151	0.26010	0.92147
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.05255	0.14545	0.77128
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.07440	0.16743	0.79319
	(!D * RN * !SN * Q * !QN)	0.06779	0.16651	0.82688
	(!D * RN * !SN * Q * !QN)	0.08959	0.18846	0.84866

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsrn_1	(D * RN * Q * !QN)	0.06837	0.16323	0.78852
	(D * RN * Q * !QN)	0.04626	0.14104	0.76655
	(D * !RN * SN * !Q * QN)	0.10224	0.19676	0.81903
	(D * !RN * SN * !Q * QN)	0.08004	0.17467	0.79693
	(D * !RN * !SN * !Q * QN)	0.10211	0.19675	0.81899
	(D * !RN * !SN * !Q * QN)	0.07997	0.17462	0.79684
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.07494	0.16827	0.79395
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.05296	0.14638	0.77210
	(!D * RN * !SN * Q * !QN)	0.10345	0.20460	0.86527
	(!D * RN * !SN * Q * !QN)	0.08152	0.18272	0.84339

GF180MCU_OSU_SC_GP12T3V3__DFFSR_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__dffsr_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)	
	D	RN	SN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__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_gp12t3v3__dffsr_1	CLK->Q (RR)	0.40967	1.71768	16.45910
	QN->Q (FR)	0.05308	1.01807	10.19690
	RN->Q (RR)	0.30494	1.61210	16.47060
	SN->Q (FR)	0.28757	1.71154	17.32290

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK->Q (RF)	0.46580	1.72469	16.25880
	QN->Q (RF)	0.04429	0.81679	8.68858
	RN->Q (FF)	0.27087	1.72040	17.40650

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK->QN (RR)	0.42171	1.00709	7.09321
	RN->QN (FR)	0.22734	1.00279	8.24101

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK->QN (RF)	0.35823	0.92285	6.28325
	RN->QN (RF)	0.25414	0.81667	6.29256
	SN->QN (FF)	0.23693	0.91666	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_gp12t3v3__dffsr_1	hold	CLK (R)	-0.15399	-0.13440	0.53349
	setup	CLK (R)	0.17544	0.14740	0.14095

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	hold	CLK (R)	-0.24786	-0.62213	-5.11941
	setup	CLK (R)	0.25264	0.62430	5.14523

Constraints(ns) for D rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	hold	CLK (R)	-0.15399	-0.13440	0.53349
	setup	CLK (R)	0.17544	0.14740	0.14095

Constraints(ns) for D falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	hold	CLK (R)	-0.24786	-0.62213	-5.11941
	setup	CLK (R)	0.25264	0.62430	5.14523

Constraints(ns) for RN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	recovery	CLK (R)	0.04657	0.04580	1.03755
	removal	CLK (R)	-0.01471	-0.01951	-0.04916
	hold	SN (R)	-0.21711	-0.42270	-0.83002
	setup	SN (R)	0.24903	0.44004	3.39837

Constraints(ns) for RN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	recovery	CLK (R)	0.04657	0.04580	1.03755
	removal	CLK (R)	-0.01471	-0.01951	-0.04916
	hold	SN (R)	-0.21755	-0.42270	-0.83002
	hold	SN (R)	-0.21711	-0.42487	-0.83093
	setup	SN (R)	0.24632	0.43754	3.28861
	setup	SN (R)	0.24903	0.44004	3.39837

Constraints(ns) for RN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	min_pulse_width	RN ()	0.16710	1.46484	16.50020
	min_pulse_width	RN ()	0.16710	1.46484	16.50020

Constraints(ns) for SN rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	recovery	CLK (R)	0.04226	0.09321	2.57461
	removal	CLK (R)	-0.03866	-0.08888	-0.61791

Constraints(ns) for SN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	recovery	CLK (R)	0.04226	0.09321	2.57461
	removal	CLK (R)	-0.03866	-0.08888	-0.61791

Constraints(ns) for SN falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	min_pulse_width	SN ()	0.22703	1.46484	16.50020
	min_pulse_width	SN ()	0.22964	1.46484	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_gp12t3v3__dffsr_1	min_pulse_width	CLK ()	0.19576	1.46484	16.50020
	min_pulse_width	CLK ()	0.21922	1.46484	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_gp12t3v3__dffsr_1	min_pulse_width	CLK ()	0.23746	1.46484	16.50020
	min_pulse_width	CLK ()	0.21140	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	0.06461	0.14149	0.65038
	CLK	0.08966	0.16677	0.67768
	RN	0.10498	0.15759	0.55926
	RN	0.12178	0.17433	0.57788
	SN	0.09522	0.15756	0.62174
	SN	0.07885	0.14152	0.60644

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	0.06765	0.11663	0.50899
	CLK	0.09217	0.14087	0.53172
	RN	0.11642	0.17430	0.59300
	RN	0.09962	0.15712	0.57629

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	0.06757	0.11658	0.50805
	CLK	0.09209	0.14087	0.53208
	RN	0.11639	0.17417	0.59143
	RN	0.09959	0.15715	0.57434

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	0.06451	0.14138	0.64790
	CLK	0.08956	0.16675	0.67511
	RN	0.10492	0.15745	0.55607
	RN	0.12172	0.17454	0.57349
	SN	0.09517	0.15759	0.61976
	SN	0.07880	0.14142	0.60374

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	-0.01322	-0.01338	-0.01335
	CLK	0.00655	0.00648	0.00649
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.08459	0.15257	0.71637
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.11017	0.17823	0.74184
	(!CLK * RN * !SN * Q * !QN)	0.03740	0.10176	0.62199
	(!CLK * RN * !SN * Q * !QN)	0.06909	0.13346	0.65351
	(!CLK * !RN * SN * !Q * QN)	0.03715	0.10099	0.62211
	(!CLK * !RN * SN * !Q * QN)	0.06896	0.13274	0.65366
	(!CLK * !RN * !SN * !Q * QN)	0.03740	0.10176	0.62199
	(!CLK * !RN * !SN * !Q * QN)	0.06909	0.13347	0.65351

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	CLK	0.01326	0.01350	0.01335
	CLK	-0.00640	-0.00648	-0.00648
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.10616	0.17683	0.74263
	(!CLK * RN * SN * Q * !QN) + (!CLK * RN * SN * !Q * QN)	0.08054	0.15123	0.71713
	(!CLK * RN * !SN * Q * !QN)	0.04832	0.11405	0.63649
	(!CLK * RN * !SN * Q * !QN)	0.01673	0.08227	0.60486
	(!CLK * !RN * SN * !Q * QN)	0.04845	0.11389	0.63632
	(!CLK * !RN * SN * !Q * QN)	0.01679	0.08219	0.60475
	(!CLK * !RN * !SN * !Q * QN)	0.04832	0.11404	0.63650
	(!CLK * !RN * !SN * !Q * QN)	0.01673	0.08227	0.60486

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.00948	0.09388	0.67565
	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.03162	0.11599	0.69779
	(!CLK * D * SN * !Q * QN)	0.05549	0.14396	0.75218
	(!CLK * D * SN * !Q * QN)	0.07233	0.16092	0.76910

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.03779	0.12552	0.70816
	(CLK * SN * !Q * QN) + (!CLK * !D * SN * !Q * QN)	0.01562	0.10331	0.68608
	(!CLK * D * SN * !Q * QN)	0.07905	0.17092	0.78403
	(!CLK * D * SN * !Q * QN)	0.06216	0.15389	0.76718

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	-0.02794	-0.02824	-0.02827
	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	0.00387	0.00390	0.00366
	(!RN * !Q * QN)	-0.02695	-0.02705	-0.02698
	(!RN * !Q * QN)	0.01311	0.01316	0.01302
	(!CLK * !D * RN * Q * !QN)	0.02957	0.08838	0.55614
	(!CLK * !D * RN * Q * !QN)	0.06711	0.12615	0.59362

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	0.02847	0.02860	0.02836
	(CLK * RN * Q * !QN) + (!CLK * D * RN * Q * !QN)	-0.00361	-0.00364	-0.00359
	(!RN * !Q * QN)	0.02708	0.02705	0.02698
	(!RN * !Q * QN)	-0.01298	-0.01299	-0.01298
	(!CLK * !D * RN * Q * !QN)	0.06259	0.11886	0.58926
	(!CLK * !D * RN * Q * !QN)	0.02490	0.08108	0.55161

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(D * RN * Q * !QN)	-0.00019	0.08469	0.66646
	(D * RN * Q * !QN)	0.04668	0.13149	0.71314
	(D * !RN * SN * !Q * QN)	0.03596	0.12492	0.73405
	(D * !RN * SN * !Q * QN)	0.08035	0.16919	0.77671
	(D * !RN * !SN * !Q * QN)	0.03583	0.12484	0.73378
	(D * !RN * !SN * !Q * QN)	0.08029	0.16912	0.77637
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	-0.00080	0.08482	0.66610
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.05315	0.13891	0.71997
	(!D * RN * !SN * Q * !QN)	0.02513	0.16701	1.15806
	(!D * RN * !SN * Q * !QN)	0.08160	0.22359	1.21437

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffsr_1	(D * RN * SN * !Q * QN)	0.14919	0.23775	1.00237
	(D * RN * SN * !Q * QN)	0.10133	0.19004	0.95592
	(D * RN * Q * !QN)	0.04734	0.13566	0.71738
	(D * RN * Q * !QN)	0.00051	0.08897	0.67051
	(D * !RN * SN * !Q * QN)	0.09390	0.18933	0.79676
	(D * !RN * SN * !Q * QN)	0.04968	0.14521	0.75327
	(D * !RN * !SN * !Q * QN)	0.09429	0.18960	0.79678
	(D * !RN * !SN * !Q * QN)	0.04981	0.14540	0.75318
	(!D * RN * SN * Q * !QN)	0.13544	0.28534	1.17447
	(!D * RN * SN * Q * !QN)	0.08476	0.23464	1.12334
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	0.05379	0.13968	0.72024
	(!D * RN * SN * !Q * QN) + (!D * !RN * !Q * QN)	-0.00030	0.08544	0.66631
	(!D * RN * !SN * Q * !QN)	0.06930	0.21561	1.20685
	(!D * RN * !SN * Q * !QN)	0.01274	0.15916	1.15038

GF180MCU_OSU_SC_GP12T3V3__DFFS_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

INPUT			OUTPUT	
D	SN	CLK	Q	QN
x	x	x	1	1

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dffs_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	D	SN	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dffs_1	0.00394	2.10339	0.01211	1.75019	1.75019

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dffs_1	0.00000	922916.00000	2599040.00000

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffs_1	QN->Q (FR)	0.05308	1.05925	11.06570

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dffs_1	QN->Q (RF)	0.04429	0.85850	9.46589

Constraint Information

Constraints(ns) for SN rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	**min_pulse_width**	**SN ()**	2.59773	2.55232	16.50020

Passive Power Information

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	CLK	-0.01316	-0.01344	-0.01337
	CLK	0.00661	0.00652	0.00649
	(!CLK * SN)	0.03106	0.09556	0.61568
	(!CLK * SN)	0.15430	0.71154	4.08711
	(!CLK * !SN)	22.50510	21.78260	17.63940
	(!CLK * !SN)	0.06696	0.13165	0.65183

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	CLK	0.01334	0.01344	0.01337
	CLK	-0.00643	-0.00651	-0.00647
	(!CLK * SN)	0.05444	0.12014	0.64280
	(!CLK * SN)	7.61604	7.07914	3.99006
	(!CLK * !SN)	11.48050	12.33680	17.61980
	(!CLK * !SN)	0.01671	0.08265	0.60560

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	(CLK * Q * !QN)	0.09816	0.99824	7.45039
	(CLK * Q * !QN)	0.23289	0.41500	1.73505
	(CLK * !Q * QN)	0.04460	0.91958	7.28579
	(CLK * !Q * QN)	0.18091	0.33382	1.57256
	(!CLK * Q * !QN)	0.02582	1.56919	11.28670
	(!CLK * Q * !QN)	0.02492	0.02473	0.02445
	(!CLK * !Q * QN)	0.02549	1.56850	11.28640
	(!CLK * !Q * QN)	0.02851	0.02855	0.02813

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	(CLK * Q * !QN)	11.50520	11.23200	8.38727
	(CLK * Q * !QN)	0.04571	0.36505	1.46732
	(CLK * !Q * QN)	11.50780	11.05130	8.30701
	(CLK * !Q * QN)	0.04356	0.18015	1.38140
	(!CLK * Q * !QN)	22.60730	21.20330	12.37990
	(!CLK * Q * !QN)	-0.02424	-0.02457	-0.02436
	(!CLK * !Q * QN)	22.60780	21.20320	12.37960
	(!CLK * !Q * QN)	-0.02710	-0.02855	-0.02813

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	(D * SN * Q * !QN)	-0.00039	0.08448	0.66628
	(D * SN * Q * !QN)	0.04673	0.13155	0.71320
	(D * SN * !Q * QN)	0.02535	0.16689	1.15810
	(D * SN * !Q * QN)	0.08221	0.22346	1.21449
	(D * !SN * Q * !QN)	11.51340	12.38690	17.43570
	(D * !SN * Q * !QN)	0.10779	0.20095	0.83672
	(D * !SN * !Q * QN)	11.47450	12.34160	17.35950
	(D * !SN * !Q * QN)	0.08031	0.16909	0.77670
	(!D * SN * Q * !QN)	0.01860	0.16071	1.15153
	(!D * SN * Q * !QN)	0.15165	0.79237	4.62583
	(!D * SN * !Q * QN)	0.04437	0.24369	1.64331
	(!D * SN * !Q * QN)	0.18673	0.88435	5.12727
	(!D * !SN * Q * !QN)	11.34770	11.43670	12.04540
	(!D * !SN * Q * !QN)	0.08029	0.16916	0.77707
	(!D * !SN * !Q * QN)	11.31110	11.39700	11.97810
	(!D * !SN * !Q * QN)	0.05306	0.13875	0.71994

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dffs_1	(D * SN * Q * !QN)	0.04746	0.13578	0.71752
	(D * SN * Q * !QN)	0.00044	0.08885	0.67044
	(D * SN * !Q * QN)	0.06900	0.21552	1.20750
	(D * SN * !Q * QN)	0.01220	0.15869	1.15074
	(D * !SN * Q * !QN)	22.57410	21.76390	17.18890
	(D * !SN * Q * !QN)	0.09861	0.20571	0.84217
	(D * !SN * !Q * QN)	22.53570	21.71790	17.13160
	(D * !SN * !Q * QN)	0.04774	0.14344	0.75161
	(!D * SN * Q * !QN)	0.07554	0.22195	1.21321
	(!D * SN * Q * !QN)	7.63635	7.15711	4.49557
	(!D * SN * !Q * QN)	0.09690	0.30184	1.70345
	(!D * SN * !Q * QN)	7.64862	7.22887	4.97836
	(!D * !SN * Q * !QN)	11.40620	11.50150	12.10870
	(!D * !SN * Q * !QN)	0.04976	0.14541	0.75358
	(!D * !SN * !Q * QN)	11.36570	11.45290	12.03210
	(!D * !SN * !Q * QN)	-0.00024	0.08683	0.66636

GF180MCU_OSU_SC_GP12T3V3__DFF_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__dff_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)	
	D	CLK	Q	QN
gf180mcu_osu_sc_gp12t3v3__dff_1	0.00393	0.01039	1.56141	1.56075

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__dff_1	CLK->Q (RR)	0.28551	1.60508	16.48390
	QN->Q (FR)	0.05308	1.02078	10.25460

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK->Q (RF)	0.37295	1.62750	16.29670
	QN->Q (RF)	0.04429	0.81921	8.74007

Delay(ns) to QN rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK->QN (RR)	0.32958	0.90413	6.99720

Delay(ns) to QN falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK->QN (RF)	0.23818	0.80457	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_gp12t3v3__dff_1	hold	CLK (R)	-0.10977	-0.09971	0.55818
	setup	CLK (R)	0.11923	0.10838	0.28948

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	hold	CLK (R)	-0.21701	-0.61346	-5.10320
	setup	CLK (R)	0.21839	0.61563	5.16047

Constraints(ns) for CLK rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	min_pulse_width	CLK ()	0.14886	1.46484	16.50020
	min_pulse_width	CLK ()	0.18013	1.46484	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_gp12t3v3__dff_1	min_pulse_width	CLK ()	0.18273	1.46484	16.50020
	min_pulse_width	CLK ()	0.17752	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	0.04957	0.13203	0.64377
	CLK	0.07764	0.16000	0.67514

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	0.05849	0.10941	0.50368
	CLK	0.07999	0.13061	0.52377

Internal switching power(pJ) to QN rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	0.05848	0.10932	0.50270
	CLK	0.07998	0.13053	0.52401

Internal switching power(pJ) to QN falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	0.04948	0.13180	0.64122
	CLK	0.07755	0.16002	0.67139

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	-0.01322	-0.01338	-0.01335
	CLK	0.00655	0.00648	0.00649
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.05984	0.13566	0.71342
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.09140	0.16726	0.74479

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	CLK	0.01326	0.01350	0.01335
	CLK	-0.00640	-0.00648	-0.00648
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.09183	0.16954	0.74724
	(!CLK * Q * !QN) + (!CLK * !Q * QN)	0.06025	0.13789	0.71567

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	(D * Q * !QN)	-0.00019	0.08469	0.66646
	(D * Q * !QN)	0.04667	0.13149	0.71314
	(!D * !Q * QN)	-0.00080	0.08503	0.66610
	(!D * !Q * QN)	0.05315	0.13881	0.71997

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dff_1	(D * Q * !QN)	0.04735	0.13586	0.71738
	(D * Q * !QN)	0.00051	0.08888	0.67051
	(D * !Q * QN)	0.12430	0.21560	0.99209
	(D * !Q * QN)	0.08252	0.17400	0.94983
	(!D * Q * !QN)	0.12095	0.27568	1.16805
	(!D * Q * !QN)	0.06424	0.21865	1.11108
	(!D * !Q * QN)	0.05380	0.13969	0.72024
	(!D * !Q * QN)	-0.00029	0.08544	0.66630

GF180MCU_OSU_SC_GP12T3V3__DLATN_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

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

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__dlatn_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	D	CLK	Q
gf180mcu_osu_sc_gp12t3v3__dlatn_1	0.00395	0.00404	1.56469

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__dlatn_1	0.00000	0.00487	0.00534

Delay Information

Delay(ns) to Q rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK->Q (FR)	0.35085	1.12638	8.41150
	D->Q (RR)	0.30388	0.87817	6.97299

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK->Q (FF)	0.40788	1.10874	7.65747
	D->Q (FF)	0.33566	1.02887	7.71021

Constraint Information

Constraints(ns) for D rising :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	hold	CLK (R)	-0.11539	-0.17775	-0.64364
	setup	CLK (R)	0.12107	0.17992	0.96647

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	hold	CLK (R)	-0.10175	-0.17342	-1.25019
	setup	CLK (R)	0.10575	0.17558	1.26218

Constraints(ns) for CLK falling (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	min_pulse_width	CLK ()	0.17231	1.46484	16.50020
	min_pulse_width	CLK ()	0.18795	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK	0.15802	0.26418	0.93251
	CLK	0.13692	0.24301	0.91127
	D	0.09612	0.17389	0.76381
	D	0.11767	0.19530	0.78519

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK	0.16075	0.25951	0.88284
	CLK	0.13824	0.23713	0.86077
	D	0.12199	0.20065	0.78765
	D	0.10050	0.17926	0.76662

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK	-0.01335	-0.01351	-0.01346
	CLK	0.00661	0.00652	0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	CLK	0.01342	0.01361	0.01346
	CLK	-0.00643	-0.00652	-0.00647

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	(D * Q)	0.03325	0.12760	0.75302
	(D * Q)	0.05508	0.14948	0.77483
	(!D * !Q)	0.03633	0.13113	0.75694
	(!D * !Q)	0.05839	0.15332	0.77887

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlatn_1	(D * Q)	0.05511	0.15198	0.77647
	(D * Q)	0.03336	0.13010	0.75466
	(!D * !Q)	0.05868	0.15461	0.77925
	(!D * !Q)	0.03661	0.13245	0.75729

GF180MCU_OSU_SC_GP12T3V3__DLAT_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__dlat_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	D	CLK	Q
gf180mcu_osu_sc_gp12t3v3__dlat_1	0.00395	0.00812	1.56358

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__dlat_1	CLK->Q (RR)	0.27048	0.89026	6.94335
	D->Q (RR)	0.30241	0.87676	6.96558

Delay(ns) to Q falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__dlat_1	CLK->Q (RF)	0.34005	0.83177	6.22097
	D->Q (FF)	0.33566	1.02863	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_gp12t3v3__dlat_1	hold	CLK (F)	-0.17552	-0.36851	-2.23181
	setup	CLK (F)	0.18047	0.39490	5.26707

Constraints(ns) for D falling :

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	hold	CLK (F)	-0.15624	-0.19076	0.12850
	setup	CLK (F)	0.16216	0.19293	-0.12808

Constraints(ns) for CLK rising (conditional):

Cell Name	Timing Check	Ref Pin(trans)	Reference Slew Rate(ns)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	min_pulse_width	CLK ()	0.14886	1.46484	16.50020
	min_pulse_width	CLK ()	0.17492	1.46484	16.50020

Power Information

Internal switching power(pJ) to Q rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	CLK	0.09268	0.24991	1.13079
	CLK	0.13725	0.29440	1.17570
	D	0.08978	0.16899	0.75443
	D	0.11764	0.19663	0.78214

Internal switching power(pJ) to Q falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	CLK	0.11223	0.20158	0.81578
	CLK	0.13893	0.22829	0.84295
	D	0.12868	0.20733	0.79445
	D	0.10041	0.17918	0.76670

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	!CLK	-0.01335	-0.01351	-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_gp12t3v3__dlat_1	!CLK	0.01345	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_gp12t3v3__dlat_1	(D * Q)	-0.00051	0.08724	0.67099
	(D * Q)	0.03392	0.12196	0.70541
	(!D * !Q)	-0.00065	0.08750	0.67094
	(!D * !Q)	0.03727	0.12542	0.70871

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__dlat_1	(D * Q)	0.03510	0.12549	0.70878
	(D * Q)	0.00050	0.09093	0.67426
	(!D * !Q)	0.03801	0.12690	0.70996
	(!D * !Q)	0.00003	0.08887	0.67209

GF180MCU_OSU_SC_GP12T3V3__INV_16

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__inv_16	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__inv_16	0.06465	23.88324

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__inv_16	A->Y (FR)	0.03946	0.57439	9.96324

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__inv_16	A->Y (RF)	0.03067	0.37350	8.47819

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_16	A	0.35872	1.40518	4.08756
	A	0.00972	1.05367	3.73664

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_16	A	-0.00697	0.98712	3.38277
	A	0.34267	1.33843	3.73611

GF180MCU_OSU_SC_GP12T3V3__INV_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__inv_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__inv_1	0.00404	1.50748

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__inv_1	A->Y (FR)	0.05308	1.00903	10.02570

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__inv_1	A->Y (RF)	0.04429	0.80913	8.53517

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_1	A	0.02213	0.06829	0.25366
	A	0.00031	0.04603	0.23179

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_1	A	-0.00058	0.04163	0.21052
	A	0.02130	0.06381	0.23249

GF180MCU_OSU_SC_GP12T3V3__INV_2

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__inv_2	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__inv_2	0.00808	2.98498

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__inv_2	A->Y (FR)	0.04616	0.86640	9.96233

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__inv_2	A->Y (RF)	0.03743	0.66628	8.47738

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_2	A	0.04450	0.14727	0.51097
	A	0.00084	0.10301	0.46711

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_2	A	-0.00100	0.09404	0.42288
	A	0.04262	0.13830	0.46704

GF180MCU_OSU_SC_GP12T3V3__INV_4

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__inv_4	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__inv_4	0.01616	5.97048

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__inv_4	**A->Y (FR)**	0.04243	0.75120	9.96289

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__inv_4	**A->Y (RF)**	0.03365	0.55082	8.47788

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_4	A	0.08964	0.31487	1.02191
	A	0.00196	0.22740	0.93418

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_4	A	-0.00200	0.20985	0.84572
	A	0.08550	0.29770	0.93405

GF180MCU_OSU_SC_GP12T3V3__INV_8

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__inv_8	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__inv_8	0.03231	11.94140

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__inv_8	A->Y (FR)	0.04045	0.65542	9.96313

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__inv_8	A->Y (RF)	0.03169	0.45371	8.47809

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_8	A	0.17947	0.66856	2.04380
	A	0.00444	0.49364	1.86833

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__inv_8	A	-0.00379	0.45591	1.69140
	A	0.17139	0.63123	1.86807

GF180MCU_OSU_SC_GP12T3V3__LSHIFDOWN

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__lshifdown	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__lshifdown	0.00417	1.54316

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__lshifdown	0.00000	0.02964	0.03235

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__lshifdown	A->Y (RR)	0.08909	0.72742	7.63192

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__lshifdown	A->Y (FF)	0.06870	0.52378	4.85906

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__lshifdown	A	0.02635	0.02889	0.03320
	A	0.00816	0.49102	3.62597
	A	0.06588	0.38707	2.45924

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__lshifdown	A	-0.00723	-0.00480	-0.00245
	A	0.11036	0.59508	3.72804
	A	0.03148	0.35380	2.42425

GF180MCU_OSU_SC_GP12T3V3__LSHIFUP

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__lshifup	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	A	Y
gf180mcu_osu_sc_gp12t3v3__lshifup	0.00541	2.02733

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__lshifup	0.00000	0.06049	0.07218

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__lshifup	A->Y (RR)	0.42820	1.71105	12.20900

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__lshifup	A->Y (FF)	0.53175	1.30966	10.41150

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__lshifup	A	-0.00064	0.08970	0.67803
	A	0.52112	1.15640	4.46166
	A	0.37280	0.88224	3.65173

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__lshifup	A	0.02988	0.12134	0.70972
	A	0.61650	0.73058	2.77048
	A	0.39725	-0.00587	-3.65173

GF180MCU_OSU_SC_GP12T3V3__MUX2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__mux2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A	B	Sel	Y
gf180mcu_osu_sc_gp12t3v3__mux2_1	0.24485	0.24485	0.00808	0.24039

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__mux2_1	A->Y (RR)	-	0.02767	0.14481	0.80157
	B->Y (RR)	-	0.02991	0.14587	0.80245
	Sel->Y (RR)	(!A * B)	0.07801	0.27348	0.84092
	Sel->Y (FR)	(A * !B)	0.06234	0.45955	2.58659

Delay(ns) to Y falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__mux2_1	A->Y (FF)	-	0.03290	0.15475	0.84003
	B->Y (FF)	-	0.03030	0.15370	0.83896
	Sel->Y (FF)	(!A * B)	0.08987	0.45325	2.08689
	Sel->Y (RF)	(A * !B)	0.05339	0.29701	1.46441

Power Information

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__mux2_1	A	-	-0.03045	-0.03052	-0.03049
	A	-	0.01298	0.01301	0.01300
	B	-	-0.02381	-0.02389	-0.02388
	B	-	0.02379	0.02381	0.02378
	Sel	(A * !B)	0.01187	0.10218	0.68712
	Sel	(A * !B)	0.00928	0.09955	0.68458
	Sel	(!A * B)	-0.01758	0.06890	0.65235
	Sel	(!A * B)	0.05196	0.13913	0.72483

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__mux2_1	A	-	0.03045	0.03052	0.03054
	A	-	-0.01298	-0.01301	-0.01300
	B	-	0.02381	0.02389	0.02390
	B	-	-0.02376	-0.02380	-0.02378
	Sel	(A * !B)	0.01613	0.10444	0.68925
	Sel	(A * !B)	0.01881	0.10767	0.69450
	Sel	(!A * B)	0.06037	0.14802	0.73129
	Sel	(!A * B)	-0.00910	0.07845	0.66226

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__mux2_1	(B * Sel * Y) + (!B * Sel * !Y)	-0.00716	-0.00717	-0.00714
	(B * Sel * Y) + (!B * Sel * !Y)	0.00470	0.00472	0.00470

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__mux2_1	(B * Sel * Y) + (!B * Sel * !Y)	0.00720	0.00717	0.00714
	(B * Sel * Y) + (!B * Sel * !Y)	-0.00470	-0.00472	-0.00470

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__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_gp12t3v3__mux2_1	(A * B * Y)	-0.00068	0.08744	0.67095
	(A * B * Y)	0.03714	0.12539	0.70871
	(!A * !B * !Y)	-0.00066	0.08705	0.67087
	(!A * !B * !Y)	0.03363	0.12159	0.70522

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__mux2_1	(A * B * Y)	0.03791	0.12653	0.70976
	(A * B * Y)	-0.00003	0.08861	0.67191
	(!A * !B * !Y)	0.03465	0.12476	0.70857
	(!A * !B * !Y)	0.00025	0.09034	0.67424

GF180MCU_OSU_SC_GP12T3V3__NAND2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__nand2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__nand2_1	0.00404	0.00402	1.04725

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__nand2_1	A->Y (FR)	0.06135	0.88318	7.95705
	B->Y (FR)	0.07226	0.90335	7.99777

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__nand2_1	A->Y (RF)	0.07046	0.96068	9.03370
	B->Y (RF)	0.07535	0.80651	7.88183

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nand2_1	A	0.02380	0.06298	0.23835
	A	0.00063	0.03945	0.21361
	B	0.03518	0.07688	0.26647
	B	0.00700	0.04826	0.23683

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nand2_1	A	0.00592	0.04288	0.21421
	A	0.02908	0.06624	0.23791
	B	0.00478	0.04362	0.23854
	B	0.03294	0.07214	0.26777

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nand2_1	(!B * Y)	-0.01403	-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_gp12t3v3__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_gp12t3v3__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_gp12t3v3__nand2_1	(!A * Y)	0.01367	0.01367	0.01355
	(!A * Y)	-0.00639	-0.00652	-0.00647

GF180MCU_OSU_SC_GP12T3V3__NOR2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__nor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__nor2_1	0.00398	0.00404	0.78121

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__nor2_1	A->Y (FR)	0.10414	1.02123	8.71519
	B->Y (FR)	0.08140	1.16612	9.85004

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__nor2_1	A->Y (RF)	0.06563	0.63342	5.37174
	B->Y (RF)	0.05058	0.59569	5.29400

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	A	0.03464	0.07607	0.32284
	A	0.00262	0.04413	0.29057
	B	0.02605	0.06617	0.26848
	B	0.00352	0.04357	0.24589

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	A	0.01126	0.05154	0.25578
	A	0.04299	0.08331	0.29150
	B	0.00069	0.03739	0.21929
	B	0.02320	0.06007	0.24590

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	(B * !Y)	-0.01312	-0.01347	-0.01336
	(B * !Y)	0.00655	0.00659	0.00651

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	(B * !Y)	0.01341	0.01351	0.01336
	(B * !Y)	-0.00648	-0.00655	-0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	(A * !Y)	-0.00449	-0.00456	-0.00451
	(A * !Y)	0.00777	0.00785	0.00780

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__nor2_1	(A * !Y)	0.00488	0.00484	0.00460
	(A * !Y)	-0.00756	-0.00760	-0.00780

GF180MCU_OSU_SC_GP12T3V3__OAI21_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__oai21_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)
	A0	A1	B	Y
gf180mcu_osu_sc_gp12t3v3__oai21_1	0.00395	0.00402	0.00404	0.77902

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__oai21_1	A0->Y (FR)	0.14064	1.03728	8.59381
	A1->Y (FR)	0.11577	1.18259	9.74633
	B->Y (FR)	0.06095	0.81156	6.75524

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__oai21_1	A0->Y (RF)	0.11004	0.73154	6.13624
	A1->Y (RF)	0.08281	0.68932	6.04630
	B->Y (RF)	0.09992	0.89705	7.41956

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai21_1	A0	0.04764	0.08155	0.28834
	A0	0.00952	0.04346	0.25008
	A1	0.03845	0.07208	0.23966
	A1	0.00980	0.04337	0.21166
	B	0.02361	0.07082	0.30431
	B	0.00044	0.04718	0.28053

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai21_1	A0	0.01757	0.04986	0.23887
	A0	0.05554	0.08796	0.27682
	A1	0.00600	0.03675	0.20627
	A1	0.03471	0.06581	0.23499
	B	0.00616	0.05023	0.27437
	B	0.02936	0.07382	0.29751

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai21_1	(A1 * B * !Y)	-0.01310	-0.01345	-0.01338
	(A1 * B * !Y)	0.00653	0.00659	0.00651
	(A1 * !B * Y)	-0.01315	-0.01346	-0.01336
	(A1 * !B * Y)	0.00652	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_gp12t3v3__oai21_1	(A1 * B * !Y)	0.01351	0.01345	0.01338
	(A1 * B * !Y)	-0.00648	-0.00652	-0.00649
	(A1 * !B * Y)	0.01349	0.01351	0.01336
	(A1 * !B * Y)	-0.00650	-0.00655	-0.00649
	(!A1 * !B * Y)	0.01365	0.01366	0.01355
	(!A1 * !B * Y)	-0.00638	-0.00648	-0.00645

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai21_1	(A0 * B * !Y)	-0.00461	-0.00456	-0.00451
	(A0 * B * !Y)	0.00790	0.00785	0.00780
	(!B * Y)	-0.01311	-0.01342	-0.01331
	(!B * Y)	0.00654	0.00653	0.00651

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai21_1	(A0 * B * !Y)	0.00488	0.00484	0.00460
	(A0 * B * !Y)	-0.00752	-0.00759	-0.00780
	(!B * Y)	0.01332	0.01344	0.01331
	(!B * Y)	-0.00650	-0.00653	-0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__oai21_1	(!A0 * !A1 * Y)	0.01414	0.01430	0.01418
	(!A0 * !A1 * Y)	-0.00174	-0.00177	-0.00175

GF180MCU_OSU_SC_GP12T3V3__OAI22_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

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

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__oai22_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)
	A0	A1	B0	B1	Y
gf180mcu_osu_sc_gp12t3v3__oai22_1	0.00395	0.00402	0.00404	0.00398	0.77583

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__oai22_1	0.00000	0.00127	0.00180

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__oai22_1	A0->Y (FR)	0.16832	1.06989	8.65665
	A1->Y (FR)	0.14341	1.21265	9.80156
	B0->Y (FR)	0.09424	1.16217	9.72787
	B1->Y (FR)	0.11761	1.01545	8.57372

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__oai22_1	A0->Y (RF)	0.15440	0.77774	6.16286
	A1->Y (RF)	0.12454	0.73716	6.07270
	B0->Y (RF)	0.10804	0.87808	7.25722
	B1->Y (RF)	0.13661	0.92009	7.33289

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	A0	0.06122	0.09725	0.32270
	A0	0.01794	0.05393	0.27923
	A1	0.05635	0.08945	0.25819
	A1	0.01817	0.05364	0.23772
	B0	0.02761	0.06304	0.24016
	B0	0.00382	0.03916	0.21705
	B1	0.03629	0.07244	0.28807
	B1	0.00307	0.03919	0.25486

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	A0	0.01752	0.05021	0.24188
	A0	0.07892	0.10910	0.29841
	A1	0.00604	0.03674	0.20859
	A1	0.05877	0.08726	0.25642
	B0	0.00762	0.04065	0.20599
	B0	0.03134	0.06470	0.23083
	B1	0.01817	0.05388	0.23680
	B1	0.05109	0.08707	0.27068

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B0 * !Y)	-0.01310	-0.01345	-0.01338
	(A1 * B0 * !Y)	0.00653	0.00659	0.00651
	(A1 * !B0 * B1 * !Y)	-0.01310	-0.01345	-0.01338
	(A1 * !B0 * B1 * !Y)	0.00653	0.00659	0.00651
	(A1 * !B0 * !B1 * Y)	-0.01313	-0.01344	-0.01336
	(A1 * !B0 * !B1 * Y)	0.00650	0.00659	0.00651
	(!A1 * !B0 * !B1 * Y)	-0.01349	-0.01357	-0.01352
	(!A1 * !B0 * !B1 * Y)	0.00645	0.00646	0.00644

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B0 * !Y)	0.01343	0.01345	0.01338
	(A1 * B0 * !Y)	-0.00648	-0.00652	-0.00649
	(A1 * !B0 * B1 * !Y)	0.01350	0.01345	0.01338
	(A1 * !B0 * B1 * !Y)	-0.00649	-0.00652	-0.00649
	(A1 * !B0 * !B1 * Y)	0.01349	0.01344	0.01336
	(A1 * !B0 * !B1 * Y)	-0.00650	-0.00653	-0.00649
	(!A1 * !B0 * !B1 * Y)	0.01355	0.01366	0.01355
	(!A1 * !B0 * !B1 * Y)	-0.00636	-0.00646	-0.00644

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A0 * B0 * !Y)	-0.00456	-0.00456	-0.00451
	(A0 * B0 * !Y)	0.00785	0.00785	0.00780
	(A0 * !B0 * B1 * !Y)	-0.00461	-0.00456	-0.00451
	(A0 * !B0 * B1 * !Y)	0.00790	0.00785	0.00780
	(!B0 * !B1 * Y)	-0.01309	-0.01339	-0.01328
	(!B0 * !B1 * Y)	0.00653	0.00655	0.00651

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A0 * B0 * !Y)	0.00483	0.00484	0.00460
	(A0 * B0 * !Y)	-0.00747	-0.00759	-0.00780
	(A0 * !B0 * B1 * !Y)	0.00487	0.00484	0.00460
	(A0 * !B0 * B1 * !Y)	-0.00750	-0.00759	-0.00780
	(!B0 * !B1 * Y)	0.01325	0.01339	0.01328
	(!B0 * !B1 * Y)	-0.00649	-0.00655	-0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B1 * !Y)	-0.00450	-0.00456	-0.00451
	(A1 * B1 * !Y)	0.00777	0.00786	0.00780
	(A0 * !A1 * B1 * !Y)	-0.00453	-0.00457	-0.00451
	(A0 * !A1 * B1 * !Y)	0.00778	0.00786	0.00779
	(!A0 * !A1 * Y)	-0.01372	-0.01404	-0.01391
	(!A0 * !A1 * Y)	0.00172	0.00173	0.00172

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B1 * !Y)	0.00482	0.00485	0.00460
	(A1 * B1 * !Y)	-0.00749	-0.00758	-0.00780
	(A0 * !A1 * B1 * !Y)	0.00486	0.00485	0.00460
	(A0 * !A1 * B1 * !Y)	-0.00752	-0.00757	-0.00779
	(!A0 * !A1 * Y)	0.01400	0.01404	0.01391
	(!A0 * !A1 * Y)	-0.00172	-0.00173	-0.00172

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B0 * !Y)	-0.01315	-0.01347	-0.01336
	(A1 * B0 * !Y)	0.00654	0.00658	0.00651
	(A0 * !A1 * B0 * !Y)	-0.01316	-0.01347	-0.01335
	(A0 * !A1 * B0 * !Y)	0.00655	0.00658	0.00651
	(!A0 * !A1 * Y)	-0.01376	-0.01409	-0.01402
	(!A0 * !A1 * Y)	0.00171	0.00174	0.00172

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai22_1	(A1 * B0 * !Y)	0.01347	0.01351	0.01336
	(A1 * B0 * !Y)	-0.00650	-0.00654	-0.00649
	(A0 * !A1 * B0 * !Y)	0.01346	0.01351	0.01335
	(A0 * !A1 * B0 * !Y)	-0.00650	-0.00653	-0.00649
	(!A0 * !A1 * Y)	0.01416	0.01409	0.01402
	(!A0 * !A1 * Y)	-0.00171	-0.00172	-0.00172

GF180MCU_OSU_SC_GP12T3V3__OAI31_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__oai31_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)				Max Cap(pf)
	A0	A1	A2	B	Y
gf180mcu_osu_sc_gp12t3v3__oai31_1	0.00395	0.00395	0.00402	0.00404	0.52736

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__oai31_1	A0->Y (FR)	0.23961	1.15358	8.21896
	A1->Y (FR)	0.21299	1.24022	8.96826
	A2->Y (FR)	0.15568	1.31921	9.77263
	B->Y (FR)	0.06084	0.72327	5.45578

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__oai31_1	A0->Y (RF)	0.12921	0.64419	4.44466
	A1->Y (RF)	0.11800	0.60851	4.34351
	A2->Y (RF)	0.08831	0.56609	4.25359
	B->Y (RF)	0.11413	0.82003	5.76240

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	A0	0.06079	0.08864	0.33351
	A0	0.01287	0.04064	0.28543
	A1	0.05138	0.07857	0.27359
	A1	0.01286	0.03999	0.23486
	A2	0.04214	0.07246	0.24306
	A2	0.01296	0.04321	0.21392
	B	0.02359	0.07641	0.36876
	B	0.00037	0.05313	0.34435

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	A0	0.02995	0.05788	0.26133
	A0	0.07751	0.10560	0.31025
	A1	0.01899	0.04583	0.22780
	A1	0.05759	0.08435	0.26747
	A2	0.00638	0.03350	0.19824
	A2	0.03569	0.06275	0.22852
	B	0.00629	0.05593	0.33656
	B	0.02942	0.07923	0.36027

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A1 * A2 * B * !Y)	-0.01313	-0.01344	-0.01338
	(A1 * A2 * B * !Y)	0.00650	0.00659	0.00651
	(A1 * !B * Y)	-0.01322	-0.01344	-0.01339
	(A1 * !B * Y)	0.00657	0.00659	0.00651
	(A1 * !A2 * B * !Y) + (!A1 * A2 * B * !Y)	-0.01313	-0.01344	-0.01338
	(A1 * !A2 * B * !Y) + (!A1 * A2 * B * !Y)	0.00650	0.00659	0.00651
	(!A1 * A2 * !B * Y)	-0.01255	-0.01296	-0.01302
	(!A1 * A2 * !B * Y)	0.00659	0.00658	0.00651
	(!A1 * !A2 * !B * Y)	-0.01350	-0.01357	-0.01352
	(!A1 * !A2 * !B * Y)	0.00645	0.00646	0.00644

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A1 * A2 * B * !Y)	0.01351	0.01344	0.01338
	(A1 * A2 * B * !Y)	-0.00649	-0.00652	-0.00649
	(A1 * !B * Y)	0.01352	0.01344	0.01339
	(A1 * !B * Y)	-0.00649	-0.00652	-0.00649
	(A1 * !A2 * B * !Y) + (!A1 * A2 * B * !Y)	0.01350	0.01344	0.01338
	(A1 * !A2 * B * !Y) + (!A1 * A2 * B * !Y)	-0.00649	-0.00652	-0.00649
	(!A1 * A2 * !B * Y)	0.01303	0.01296	0.01302
	(!A1 * A2 * !B * Y)	-0.00650	-0.00648	-0.00649
	(!A1 * !A2 * !B * Y)	0.01355	0.01366	0.01355
	(!A1 * !A2 * !B * Y)	-0.00636	-0.00646	-0.00644

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A2 * !B * Y)	-0.00960	-0.00972	-0.00964
	(A2 * !B * Y)	0.00658	0.00654	0.00651
	(A0 * B * !Y) + (!A0 * A2 * B * !Y)	-0.00839	-0.00853	-0.00845
	(A0 * B * !Y) + (!A0 * A2 * B * !Y)	0.00659	0.00655	0.00650
	(!A2 * !B * Y)	-0.01310	-0.01340	-0.01327
	(!A2 * !B * Y)	0.00653	0.00655	0.00651

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A2 * !B * Y)	0.00960	0.00972	0.00964
	(A2 * !B * Y)	-0.00646	-0.00654	-0.00649
	(A0 * B * !Y) + (!A0 * A2 * B * !Y)	0.00839	0.00853	0.00845
	(A0 * B * !Y) + (!A0 * A2 * B * !Y)	-0.00646	-0.00655	-0.00649
	(!A2 * !B * Y)	0.01325	0.01340	0.01327
	(!A2 * !B * Y)	-0.00649	-0.00655	-0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A1 * B * !Y)	-0.00457	-0.00456	-0.00451
	(A1 * B * !Y)	0.00785	0.00785	0.00780
	(A1 * !B * Y)	-0.01314	-0.01342	-0.01333
	(A1 * !B * Y)	0.00660	0.00653	0.00651
	(A0 * !A1 * B * !Y)	-0.00454	-0.00449	-0.00442
	(A0 * !A1 * B * !Y)	0.00789	0.00785	0.00780
	(!A1 * !B * Y)	-0.01208	-0.01283	-0.01279
	(!A1 * !B * Y)	0.00653	0.00651	0.00651

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__oai31_1	(A1 * B * !Y)	0.00488	0.00484	0.00460
	(A1 * B * !Y)	-0.00751	-0.00759	-0.00780
	(A1 * !B * Y)	0.01328	0.01345	0.01333
	(A1 * !B * Y)	-0.00646	-0.00653	-0.00649
	(A0 * !A1 * B * !Y)	0.00498	0.00494	0.00442
	(A0 * !A1 * B * !Y)	-0.00699	-0.00709	-0.00775
	(!A1 * !B * Y)	0.01289	0.01283	0.01279
	(!A1 * !B * Y)	-0.00648	-0.00651	-0.00649

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__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_GP12T3V3__OR2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__or2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__or2_1	0.00405	0.00398	1.55634

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__or2_1	A->Y (RR)	0.09847	0.59196	6.27342
	B->Y (RR)	0.11700	0.69070	6.87422

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__or2_1	A->Y (FF)	0.14110	0.96784	8.44438
	B->Y (FF)	0.16453	0.89697	7.98435

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__or2_1	A	0.02166	0.08991	0.55597
	A	0.04412	0.11230	0.57669
	B	0.03257	0.10969	0.66201
	B	0.06448	0.14141	0.69352

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__or2_1	A	0.04785	0.11726	0.57924
	A	0.02524	0.09492	0.55677
	B	0.05661	0.13028	0.68094
	B	0.02460	0.09847	0.64951

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__or2_1	(B * Y)	-0.00462	-0.00456	-0.00451
	(B * Y)	0.00790	0.00786	0.00780

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__or2_1	(A * Y)	-0.01310	-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_gp12t3v3__or2_1	(A * Y)	0.01350	0.01345	0.01338
	(A * Y)	-0.00649	-0.00652	-0.00649

GF180MCU_OSU_SC_GP12T3V3__TBUF_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

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

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__tbuf_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	EN	Y
gf180mcu_osu_sc_gp12t3v3__tbuf_1	0.00404	0.00535	0.81673

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__tbuf_1	0.00000	0.00185	0.00205

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	A->Y (RR)	0.16589	0.84275	6.72708
	EN->Y (FR)	0.07459	0.94597	6.56566
	EN->Y (RR)	0.10443	0.78252	6.81903

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	A->Y (FF)	0.15159	0.85654	6.35872
	EN->Y (FF)	0.08818	0.94597	6.56566
	EN->Y (RF)	0.04306	0.74620	7.02864

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	A	0.04213	0.12957	0.71860
	A	0.05898	0.14631	0.73533
	EN	0.02505	0.11343	0.70635
	EN	0.04831	0.13663	0.72340

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	A	0.05411	0.14460	0.72986
	A	0.03732	0.12792	0.71421
	EN	0.02117	0.11004	0.69807
	EN	0.05013	0.13906	0.72745

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	!EN	0.01268	0.09945	0.68264
	!EN	0.03474	0.12147	0.70462

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	!EN	0.02860	0.11647	0.69971
	!EN	0.00654	0.09448	0.67766

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	(A * Y)	0.01162	0.10004	0.68416
	(A * Y)	0.03604	0.12450	0.70862
	(!A * !Y)	0.00421	0.09375	0.67856
	(!A * !Y)	0.03268	0.12229	0.70703

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tbuf_1	(A * Y)	0.02329	0.11238	0.69563
	(A * Y)	-0.00118	0.08786	0.67122
	(!A * !Y)	0.02350	0.11512	0.69963
	(!A * !Y)	-0.00487	0.08664	0.67118

GF180MCU_OSU_SC_GP12T3V3__TIEH

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__tieh	0.00000

Pin Capacitance Information

Cell Name	Max Cap(pf)
	Y
gf180mcu_osu_sc_gp12t3v3__tieh	3.44214

Leakage Information

Cell Name	Leakage(nW)		
	Min.	**Avg**	**Max.**
gf180mcu_osu_sc_gp12t3v3__tieh	0.00000	0.00000	0.00000

GF180MCU_OSU_SC_GP12T3V3__TIEL

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__tiel	0.00000

Pin Capacitance Information

Cell Name	Max Cap(pf)
	Y
gf180mcu_osu_sc_gp12t3v3__tiel	5.16285

Leakage Information

Cell Name	Leakage(nW)		
	Min.	**Avg**	**Max.**
gf180mcu_osu_sc_gp12t3v3__tiel	0.00000	0.00000	0.00000

GF180MCU_OSU_SC_GP12T3V3__TINV_1

gf180mcu_osu_sc_gp12t3v3_TT_25C.ccs
Cell Library: Process , Voltage 3.30,
Temp 25.00

Truth Table

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

Footprint

Cell Name	Area
gf180mcu_osu_sc_gp12t3v3__tinv_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	EN	Y
gf180mcu_osu_sc_gp12t3v3__tinv_1	0.00395	0.00535	0.79686

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__tinv_1	0.00000	0.00111	0.00146

Delay Information

Delay(ns) to Y rising :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__tinv_1	A->Y (FR)	0.12271	1.02711	8.71812
	EN->Y (FR)	0.07445	0.94597	6.56566
	EN->Y (RR)	0.10454	0.77289	6.65556

Delay(ns) to Y falling :

Cell Name	Timing Arc(Dir)	Delay(ns)		
		First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__tinv_1	A->Y (RF)	0.09325	0.72326	6.23215
	EN->Y (FF)	0.08817	0.94597	6.56566
	EN->Y (RF)	0.04307	0.73652	6.88897

Power Information

Internal switching power(pJ) to Y rising :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	A	0.04242	0.07680	0.28122
	A	0.01587	0.05019	0.25433
	EN	0.02504	0.11342	0.70237
	EN	0.04781	0.13611	0.72488

Internal switching power(pJ) to Y falling :

Cell Name	Input	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	A	0.01048	0.04384	0.22932
	A	0.03703	0.07054	0.25664
	EN	0.02028	0.10913	0.69692
	EN	0.05012	0.13904	0.72779

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	!EN	-0.01338	-0.01350	-0.01345
	!EN	0.00653	0.00649	0.00646

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	!EN	0.01338	0.01361	0.01345
	!EN	-0.00636	-0.00649	-0.00646

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	(A * !Y)	0.00407	0.09361	0.67840
	(A * !Y)	0.03268	0.12229	0.70695
	(!A * Y)	0.01163	0.10005	0.68416
	(!A * Y)	0.03598	0.12446	0.70857

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

Cell Name	When	Power(pJ)		
		first	mid	last
gf180mcu_osu_sc_gp12t3v3__tinv_1	(A * !Y)	0.02361	0.11522	0.69974
	(A * !Y)	-0.00487	0.08664	0.67118
	(!A * Y)	0.02329	0.11238	0.69563
	(!A * Y)	-0.00113	0.08781	0.67127

GF180MCU_OSU_SC_GP12T3V3__XNOR2_1

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_gp12t3v3__xnor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__xnor2_1	0.00806	0.00799	0.78925

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__xnor2_1	A->Y (RR)	B	0.16278	0.82542	6.49144
	A->Y (FR)	!B	0.12399	1.19686	9.84618
	B->Y (RR)	A	0.13349	0.81230	6.65943
	B->Y (FR)	!A	0.14482	1.04772	8.68525

Delay(ns) to Y falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__xnor2_1	A->Y (FF)	B	0.17350	0.89278	6.42840
	A->Y (RF)	!B	0.08363	0.69368	6.11426
	B->Y (FF)	A	0.13336	0.84375	6.37809
	B->Y (RF)	!A	0.11526	0.74755	6.21650

Power Information

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__xnor2_1	A	B	0.03169	0.11870	0.70846
	A	B	0.06464	0.15159	0.74078
	A	!B	0.06264	0.18632	0.94275
	A	!B	0.01849	0.14218	0.89852
	B	A	0.01377	0.10177	0.69052
	B	A	0.05418	0.14226	0.73084
	B	!A	0.07193	0.19520	0.99091
	B	!A	0.01836	0.14166	0.93700

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__xnor2_1	A	B	0.07857	0.16827	0.75300
	A	B	0.04722	0.13702	0.72262
	A	!B	0.02566	0.14390	0.89953
	A	!B	0.06936	0.18792	0.94320
	B	A	0.06470	0.15510	0.74101
	B	A	0.02395	0.11454	0.70118
	B	!A	0.03666	0.15809	0.93352
	B	!A	0.08975	0.21107	0.98716

GF180MCU_OSU_SC_GP12T3V3__XOR2_1

gf180mcu_osu_sc_gp12t3v3_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_gp12t3v3__xor2_1	0.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	A	B	Y
gf180mcu_osu_sc_gp12t3v3__xor2_1	0.00799	0.00801	0.79014

Leakage Information

Cell Name	Leakage(nW)		
	Min.	Avg	Max.
gf180mcu_osu_sc_gp12t3v3__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_gp12t3v3__xor2_1	A->Y (RR)	!B	0.13360	0.81262	6.66700
	A->Y (FR)	B	0.14686	1.04886	8.69415
	B->Y (RR)	!A	0.17165	0.85075	6.70185
	B->Y (FR)	A	0.11670	1.00669	8.60272

Delay(ns) to Y falling (conditional):

Cell Name	Timing Arc(Dir)	When	Delay(ns)		
			First	Mid	Last
gf180mcu_osu_sc_gp12t3v3__xor2_1	A->Y (FF)	!B	0.13331	0.84412	6.38493
	A->Y (RF)	B	0.11371	0.74740	6.22156
	B->Y (FF)	!A	0.14208	0.83273	6.17699
	B->Y (RF)	A	0.10862	0.90222	7.40536

Power Information

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__xor2_1	A	B	0.07732	0.20040	0.99711
	A	B	0.02858	0.15188	0.94818
	A	!B	0.01232	0.10043	0.68920
	A	!B	0.05356	0.14165	0.73024
	B	A	0.06423	0.18500	0.96462
	B	A	0.02062	0.14125	0.92084
	B	!A	0.02799	0.11414	0.70278
	B	!A	0.06392	0.15030	0.73883

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

Cell Name	Input	When	Power(pJ)		
			first	mid	last
gf180mcu_osu_sc_gp12t3v3__xor2_1	A	B	0.03060	0.15204	0.92722
	A	B	0.08005	0.20141	0.97732
	A	!B	0.06598	0.15638	0.74265
	A	!B	0.02462	0.11519	0.70283
	B	A	0.03119	0.15059	0.90318
	B	A	0.07547	0.19488	0.94742
	B	!A	0.07065	0.16119	0.74752
	B	!A	0.03339	0.12406	0.71044