NANGATE NAND3_X1

Databook Build Date: Thursday Feb 17 15:07 2011

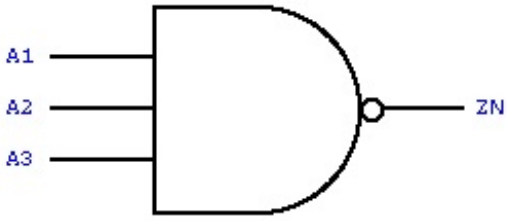
Conditions for characterization library **NangateOpenCellLibrary**, corner **NangateOpenCellLibrary_typical_typical**: Vdd= **1.10**V, Tj= **25.0** deg. C .

Additional corners: NangateOpenCellLibrary [NangateOpenCellLibrary_slow_slow], NangateOpenCellLibrary [NangateOpenCellLibrary_fast_fast], NangateOpenCellLibrary [NangateOpenCellLibrary_worst_low_worst_low], NangateOpenCellLibrary [NangateOpenCellLibrary_low_temp_low_temp].

Output transition is defined from **30%** to **70%** (rising) and from **70%** to **30%** (falling) output voltage.

Propagation delay is measured from **50%** (input rise) or **50%** (input fall) to **50%** (output rise) or **50%** (output fall).

Strength	1
Cell Area	1.064 um^2
Equation	ZN = "!((A1 & A2) & A3)"
Type	Combinational
Input	A1, A2, A3
Output	ZN
PG Pins	VDD (primary_power), VSS (primary_ground)



State Table			
A1	**A2**	**A3**	**ZN**
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**58.3649**	**0.3656**	**58.3649**
A1 to ZN	**fall**	0.01	0.18	0.02	0.26
	rise	0.01	0.15	0.04	0.25
A2 to ZN	**fall**	0.01	0.18	0.03	0.25
	rise	0.01	0.15	0.05	0.25
A3 to ZN	**fall**	0.01	0.19	0.02	0.23
	rise	0.01	0.15	0.06	0.26

Output Transition [ns]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**58.3649**	**0.3656**	**58.3649**
A1 to ZN	**fall**	0.01	0.15	0.04	0.16
	rise	0.01	0.14	0.04	0.15
A2 to ZN	**fall**	0.01	0.15	0.03	0.16
	rise	0.01	0.14	0.03	0.15
A3 to ZN	**fall**	0.01	0.15	0.03	0.16
	rise	0.01	0.14	0.03	0.15

Capacitance [fF]	
A1	1.5903
A2	1.6212
A3	1.6504

Leakage [nW]
18.10

Dynamic Power Consumption [uW/GHz]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**58.3649**	**0.3656**	**58.3649**
A1 to ZN	**fall**	0.52	0.56	3.28	1.11
	rise	2.47	2.46	5.19	3.45
A2 to ZN	**fall**	0.53	0.56	2.42	0.82
	rise	3.20	3.01	5.85	4.37
A3 to ZN	**fall**	0.53	0.56	2.25	0.80
	rise	3.77	3.83	6.61	4.88

NANGATE NAND3_X2

Databook Build Date: Thursday Feb 17 15:07 2011

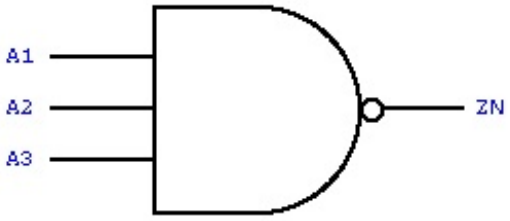
Conditions for characterization library **NangateOpenCellLibrary**, corner **NangateOpenCellLibrary_typical_typical**: Vdd= **1.10**V, Tj= **25.0** deg. C .

Additional corners: NangateOpenCellLibrary [NangateOpenCellLibrary_slow_slow], NangateOpenCellLibrary [NangateOpenCellLibrary_fast_fast], NangateOpenCellLibrary [NangateOpenCellLibrary_worst_low_worst_low], NangateOpenCellLibrary [NangateOpenCellLibrary_low_temp_low_temp].

Output transition is defined from **30%** to **70%** (rising) and from **70%** to **30%** (falling) output voltage.

Propagation delay is measured from **50%** (input rise) or **50%** (input fall) to **50%** (output rise) or **50%** (output fall).

Strength	2
Cell Area	1.862 um^2
Equation	ZN = "!((A1 & A2) & A3)"
Type	Combinational
Input	A1, A2, A3
Output	ZN
PG Pins	VDD (primary_power), VSS (primary_ground)



State Table			
A1	**A2**	**A3**	**ZN**
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**116.272**	**0.3656**	**116.272**
A1 to ZN	**fall**	0.01	0.18	0.02	0.26
	rise	0.01	0.15	0.04	0.25
A2 to ZN	**fall**	0.01	0.18	0.03	0.25
	rise	0.01	0.15	0.05	0.25
A3 to ZN	**fall**	0.01	0.19	0.02	0.23
	rise	0.01	0.15	0.06	0.26

Output Transition [ns]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**116.272**	**0.3656**	**116.272**
A1 to ZN	**fall**	0.01	0.15	0.04	0.16
	rise	0.01	0.14	0.04	0.15
A2 to ZN	**fall**	0.01	0.15	0.03	0.16
	rise	0.01	0.14	0.03	0.15
A3 to ZN	**fall**	0.01	0.15	0.03	0.16
	rise	0.01	0.14	0.03	0.15

Capacitance [fF]	
A1	2.9778
A2	3.2864
A3	3.5589

Leakage [nW]
36.21

Dynamic Power Consumption [uW/GHz]					
Input Transition [ns]		**0.0012**		**0.1985**	
Load Capacitance [fF]		**0.3656**	**116.272**	**0.3656**	**116.272**
A1 to ZN	**fall**	1.24	1.31	6.74	2.40
	rise	5.11	5.07	10.57	7.05
A2 to ZN	**fall**	1.24	1.31	5.03	1.83
	rise	6.57	6.85	11.85	8.89
A3 to ZN	**fall**	1.24	1.31	4.68	1.78
	rise	7.72	8.20	13.41	10.20