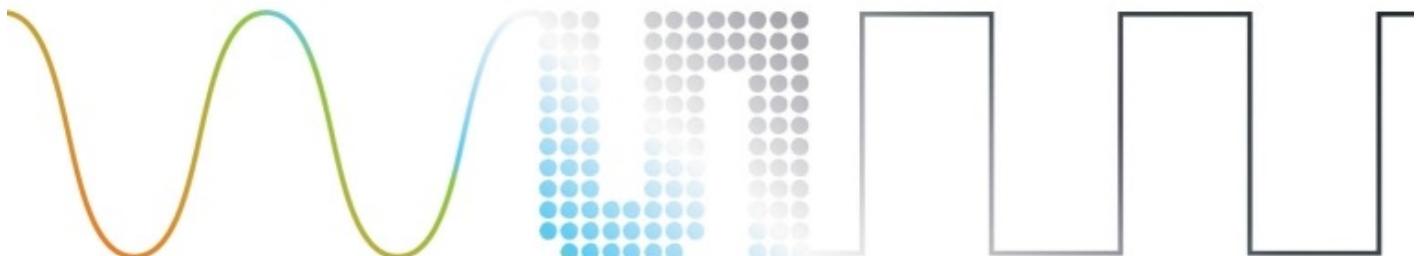


analog meets digital



am
u

0.35μm CMOS

Digital Standard Cell Databook

About ams

ams develops and manufactures high performance analog semiconductors that solve its customers most challenging problems with innovative solutions. ams products are aimed at applications which require extreme precision, accuracy, dynamic range, sensitivity, and ultra-low power consumption. ams product range includes sensors, sensor interfaces, power management ICs and wireless ICs for customers in the consumer, industrial, medical, mobile communications and automotive markets.

About Full Service Foundry

The Full Service Foundry business unit of ams has successfully positioned itself in the analog/mixed-signal foundry market. Its process technology portfolio includes 0.18µm and 0.35µm specialty technologies based on ams analog, mixed-signal, high-voltage and RF processes. With its More than Silicon initiative, ams offers a comprehensive service and technology package that goes beyond industry-standard foundry services. It includes leading-edge technology extensions such as 3DIC integration using Through Silicon Vias, color coating, back end process customization, WLCSP and many more. Superior support during the design phase, high-end tools and experienced engineers, silicon-proven high-performance analog IP blocks, assembly and test services for turnkey solutions complete the Full Service Foundry package.

Preface

This Standard Cell Databook contains logic and timing information, cell area and a brief description of the ams standard cell libraries available for ams 0.18µm and 0.35µm analog specialty processes. Lowest power consumption, high speed, noise immunity and applicability to a wide range of automotive, communications, medical and industrial design requirements are the key benefits of these advanced processes.

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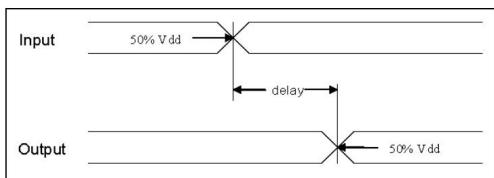
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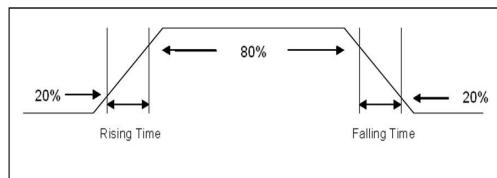
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Website: asic.ams.com

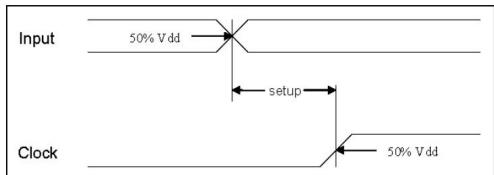
	Description	Index 1 →	Index 2 ↓
Timing	Input to output propagation delay output transition time	Input Transition	Output Load Cap
Dynamic Power	Internal switching power	Input Transition	Output Load Cap
Input Power Hidden Power	Dissipated power due to input transition with no change in output or cell state	Input Transition	N/A
Pulse Width	Minimum clock/set/reset pulse width	Minimum Pulse Width	N/A
Setup Time	Setup time for data input before clock transition	Setup/Hold Data Transition	Clock Transition
Hold Time	Hold time for data input after clock transition	Setup/Hold Data Transition	Clock Transition
Removal Time	The minimum time after clock transition before an asynchronous set/reset can be de-asserted	Recovery/Removal Set/Reset Transition	Clock Transition
Recovery Time	The minimum time before clock transition that an asynchronous set/reset must be de-asserted	Recovery/Removal Set/Reset Transition	Clock Transition



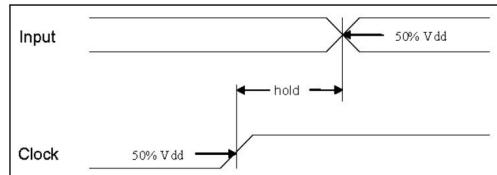
Propagation Delay



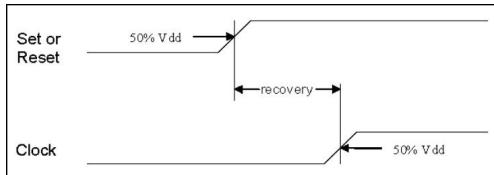
Transition Time



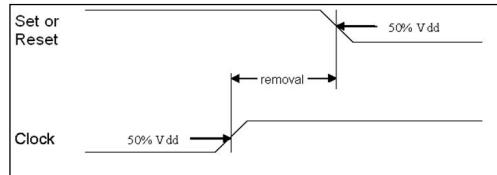
Setup Time



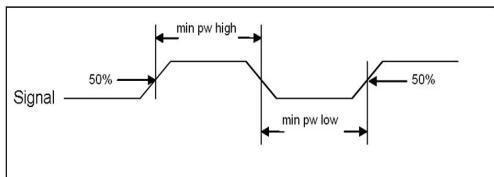
Hold Time



Recovery Time



Removal Time

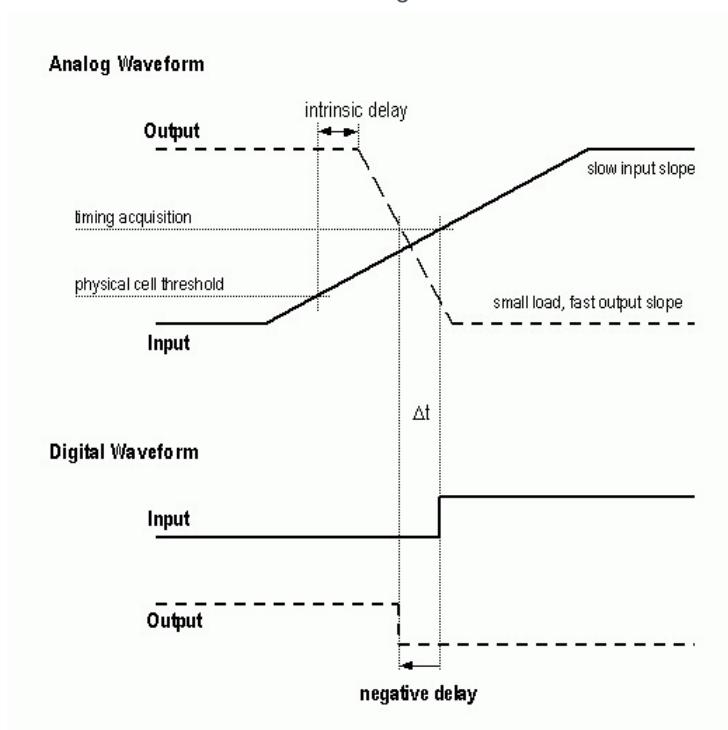


Pulse Width

Interpreting "Negative Delays"

Under certain conditions, delay calculations may result in negative delay values.

These "negative delays" are mainly caused by the difference between timing acquisition and the physical cell threshold as shown in the drawing below.



Related Documents / Revisions

Rev.	Date	Related Documents & Comments
A	Oct 2011	New databook generation
B	Jan 2013	Update
C	May 2014	Update

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Library

c35_CORELIB_TYP

Corner

typical

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	145.600 um ²
Equation	CO = "(B & A)" S = "(B ^ A)"
Type	Combinational
Input	A, B
Output	CO, S



State Table			
A	B	CO	S
L	L	L	L
L	H	L	H
H	L	L	H
H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to CO	fall	0.26	0.84	1.34	2.00
	rise	0.20	1.03	0.07	0.94
A to S	fall	0.34	0.89	1.01	1.68
	rise	0.37	1.19	1.44	2.25
B to CO	fall	0.28	0.86	1.47	2.12
	rise	0.20	1.03	-0.11	0.77
B to S	fall	0.35	0.90	1.27	1.90
	rise	0.42	1.24	1.61	2.41

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to CO	fall	0.09	0.76	0.17	0.80
	rise	0.10	1.32	0.17	1.36
A to S	fall	0.08	0.75	0.16	0.82
	rise	0.10	1.32	0.16	1.38
B to CO	fall	0.09	0.76	0.17	0.79
	rise	0.10	1.32	0.16	1.37
B to S	fall	0.08	0.75	0.15	0.79
	rise	0.10	1.32	0.15	1.38

Capacitance [fF]	
A	8.1920
B	8.4760

Leakage [pW]	
	1.08

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to CO	fall	131.12	129.29	273.56	264.73
	rise	75.64	76.75	207.25	203.65
A to S	fall	119.97	125.56	379.26	404.29
	rise	102.46	102.38	339.14	374.95
B to CO	fall	141.19	137.46	293.25	278.82
	rise	82.93	84.54	208.18	218.09
B to S	fall	113.74	119.62	356.16	371.16
	rise	102.89	102.50	308.10	347.49

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	145.600 um ²
Equation	CO = "(B &A)" S = "(B ^ A)"
Type	Combinational
Input	A, B
Output	CO, S



State Table			
A	B	CO	S
L	L	L	L
L	H	L	H
H	L	L	H
H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to CO	fall	0.23	0.78	1.28	1.92
	rise	0.16	0.98	-0.02	0.84
A to S	fall	0.28	0.80	0.95	1.61
	rise	0.32	1.12	1.36	2.15
B to CO	fall	0.25	0.81	1.42	2.05
	rise	0.17	0.98	-0.19	0.68
B to S	fall	0.29	0.81	1.21	1.82
	rise	0.36	1.16	1.53	2.32

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to CO	fall	0.08	0.73	0.16	0.77
	rise	0.09	1.29	0.15	1.33
A to S	fall	0.07	0.72	0.14	0.79
	rise	0.08	1.29	0.14	1.35
B to CO	fall	0.08	0.73	0.16	0.76
	rise	0.09	1.29	0.15	1.34
B to S	fall	0.07	0.72	0.14	0.76
	rise	0.09	1.29	0.14	1.35

Capacitance [fF]	
A	13.2210
B	13.8970

Leakage [pW]	
	1.41

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to CO	fall	219.53	216.94	505.94	490.84
	rise	123.95	127.55	380.91	386.77
A to S	fall	210.33	221.10	725.03	786.91
	rise	168.47	170.42	639.73	725.03
B to CO	fall	239.35	232.25	544.07	516.17
	rise	139.21	143.43	382.01	416.15
B to S	fall	198.00	209.04	679.03	718.52
	rise	170.27	169.90	575.79	667.90

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	273.000 um ²
Equation	CO = "(((CI & B) (CI & A)) (B & A))" S = "((CI ^ B) ^ A)"
Type	Combinational
Input	A, B, CI
Output	CO, S



State Table				
A	B	CI	CO	S
L	L	L	L	L
L	L	H	L	H
L	H	L	L	H
L	H	H	H	L
H	L	L	L	H
H	L	H	H	L
H	H	L	H	L
H	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to CO	fall	0.32	0.92	1.12	1.81
	rise	0.24	1.08	0.17	1.07
A to S	fall	0.45	1.09	1.28	2.01
	rise	0.53	1.35	1.34	2.15
B to CO	fall	0.33	0.93	1.40	2.06
	rise	0.25	1.09	0.43	1.30
B to S	fall	0.45	1.08	1.48	2.19
	rise	0.54	1.37	1.62	2.44
CI to CO	fall	0.28	0.88	1.25	1.93
	rise	0.22	1.05	0.25	1.12
CI to S	fall	0.43	1.06	1.65	2.33
	rise	0.50	1.32	1.49	2.30

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to CO	fall	0.10	0.76	0.18	0.83
	rise	0.10	1.33	0.16	1.38
A to S	fall	0.12	0.79	0.20	0.85
	rise	0.12	1.32	0.18	1.40
B to CO	fall	0.10	0.77	0.17	0.86
	rise	0.10	1.33	0.16	1.38
B to S	fall	0.12	0.79	0.18	0.84
	rise	0.12	1.33	0.17	1.38
CI to CO	fall	0.10	0.77	0.19	0.82
	rise	0.10	1.32	0.17	1.36
CI to S	fall	0.12	0.79	0.17	0.87
	rise	0.12	1.32	0.17	1.37

Capacitance [fF]	
A	22.0050
B	20.1320
CI	14.3500

Leakage [pW]	
	1.58

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to CO	fall	213.37	208.67	434.02	437.42
	rise	88.71	98.48	300.73	319.65
A to S	fall	185.36	201.06	468.50	505.84
	rise	129.19	125.88	406.95	428.60
B to CO	fall	208.29	204.17	400.65	402.50
	rise	97.26	107.19	282.84	299.74
B to S	fall	173.72	189.29	419.38	453.89
	rise	129.15	125.93	379.52	392.51
C1 to CO	fall	185.38	181.73	379.78	372.06
	rise	104.65	113.13	276.49	296.00
C1 to S	fall	162.66	179.66	384.82	422.06
	rise	133.56	131.33	362.26	372.62

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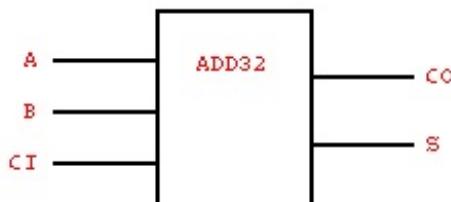
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	273.000 um ²
Equation	CO = "(((CI & B) (CI & A)) (B & A))" S = "((CI ^ B) ^ A)"
Type	Combinational
Input	A, B, CI
Output	CO, S



State Table				
A	B	CI	CO	S
L	L	L	L	L
L	L	H	L	H
L	H	L	L	H
L	H	H	H	L
H	L	L	L	H
H	L	H	H	L
H	H	L	H	L
H	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to CO	fall	0.28	0.85	1.05	1.72
	rise	0.21	1.03	0.12	1.00
A to S	fall	0.38	0.98	1.19	1.89
	rise	0.45	1.25	1.23	2.02
B to CO	fall	0.29	0.86	1.33	1.96
	rise	0.22	1.04	0.37	1.22
B to S	fall	0.38	0.98	1.39	2.06
	rise	0.46	1.27	1.50	2.30
CI to CO	fall	0.24	0.82	1.18	1.84
	rise	0.19	1.01	0.18	1.04
CI to S	fall	0.36	0.96	1.55	2.20
	rise	0.42	1.23	1.37	2.17

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to CO	fall	0.09	0.73	0.16	0.80
	rise	0.09	1.29	0.15	1.35
A to S	fall	0.10	0.75	0.18	0.81
	rise	0.10	1.29	0.16	1.37
B to CO	fall	0.09	0.74	0.16	0.83
	rise	0.09	1.29	0.15	1.35
B to S	fall	0.10	0.75	0.16	0.81
	rise	0.10	1.29	0.15	1.35
CI to CO	fall	0.09	0.74	0.17	0.79
	rise	0.09	1.29	0.15	1.33
CI to S	fall	0.10	0.75	0.16	0.84
	rise	0.10	1.29	0.15	1.34

Capacitance [fF]	
A	36.5910
B	32.8370
CI	23.7410

Leakage [pW]	
	2.05

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to CO	fall	382.40	375.91	823.28	841.79
	rise	133.93	149.02	554.46	603.21
A to S	fall	319.56	341.74	886.03	966.11
	rise	220.08	216.90	774.50	839.58
B to CO	fall	371.26	366.48	755.11	769.54
	rise	151.72	166.70	517.39	561.18
B to S	fall	295.41	317.40	785.67	858.80
	rise	219.70	217.38	719.30	764.68
C1 to CO	fall	329.28	324.71	716.69	709.72
	rise	168.33	180.62	503.84	555.72
C1 to S	fall	273.87	298.41	715.46	794.79
	rise	229.38	227.78	684.30	721.96

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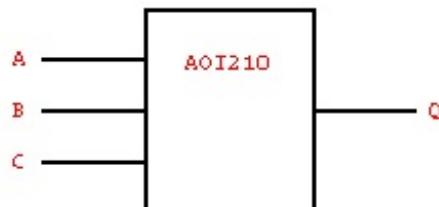
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	210
Cell Area	72.800 um ²
Equation	$Q = "!(A \& B) C"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	L	H
H	H	-	L
-	L	L	H
-	-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.09	0.52	0.07
	rise	0.14	0.93	0.67
B to Q	fall	0.09	0.53	-0.15
	rise	0.16	0.95	0.86
C to Q	fall	0.07	0.56	0.11
	rise	0.10	0.90	0.79

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.11	0.70	0.79
	rise	0.14	1.33	0.67
B to Q	fall	0.11	0.70	0.75
	rise	0.17	1.36	0.70
C to Q	fall	0.08	0.74	0.65
	rise	0.16	1.36	0.63

Capacitance [fF]	
A	4.8450
B	5.1960
C	4.0340

Leakage [pW]	
0.33	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	33.04	38.42	303.35
	rise	85.65	87.26	427.92
B to Q	fall	32.98	38.45	310.74
	rise	100.90	102.09	488.16
C to Q	fall	5.56	6.32	216.73
	rise	58.75	59.70	330.37

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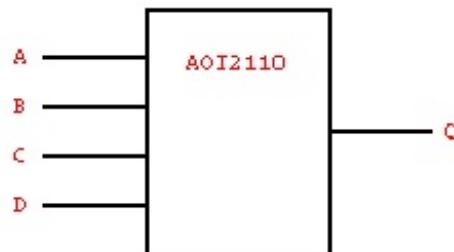
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2110
Cell Area	91.000 um ²
Equation	$Q = "!(D \mid C) \mid (B \& A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	L	H
H	H	-	-	L
-	L	L	L	H
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.15	1.02	0.39	1.82
	rise	0.22	1.77	0.55	2.28
B to Q	fall	0.15	1.03	0.10	1.38
	rise	0.24	1.78	0.74	2.36
C to Q	fall	0.14	1.11	0.50	2.11
	rise	0.19	1.74	0.66	2.49
D to Q	fall	0.11	1.08	0.29	2.05
	rise	0.15	1.69	0.82	2.80

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.19	1.38	1.00	2.09
	rise	0.23	2.54	0.86	2.79
B to Q	fall	0.19	1.38	0.94	1.92
	rise	0.26	2.57	0.93	2.81
C to Q	fall	0.16	1.47	0.84	2.18
	rise	0.26	2.57	0.80	2.83
D to Q	fall	0.12	1.43	0.72	2.14
	rise	0.25	2.57	0.75	2.92

Capacitance [fF]	
A	6.1920
B	6.3170
C	5.1320
D	4.0740

Leakage [pW]	
	0.28

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	53.94	65.76	393.08	263.93
	rise	150.26	151.75	534.38	413.03
B to Q	fall	54.19	65.71	413.15	295.44
	rise	165.08	166.04	611.68	457.84
C to Q	fall	18.65	19.76	290.46	182.09
	rise	114.28	115.21	416.07	318.63
D to Q	fall	7.78	8.84	242.24	160.02
	rise	84.09	85.34	376.41	280.11

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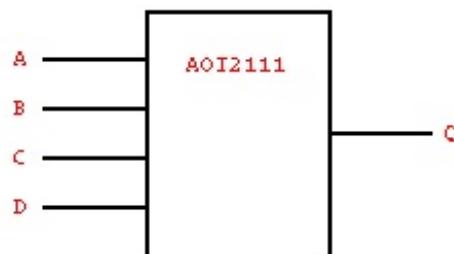
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2111
Cell Area	91.000 um ²
Equation	$Q = "!(D \mid C) \mid (B \& A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	L	H
H	H	-	-	L
-	L	L	L	H
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.11	0.55	0.30	1.15
	rise	0.17	0.95	0.46	1.49
B to Q	fall	0.12	0.56	0.03	0.79
	rise	0.19	0.97	0.67	1.60
C to Q	fall	0.12	0.64	0.48	1.48
	rise	0.15	0.92	0.52	1.63
D to Q	fall	0.09	0.61	0.24	1.38
	rise	0.11	0.88	0.67	1.88

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.15	0.73	0.93	1.53
	rise	0.17	1.32	0.80	1.74
B to Q	fall	0.15	0.73	0.88	1.41
	rise	0.19	1.35	0.85	1.76
C to Q	fall	0.13	0.82	0.77	1.56
	rise	0.19	1.35	0.72	1.76
D to Q	fall	0.09	0.79	0.64	1.52
	rise	0.19	1.35	0.66	1.82

Capacitance [fF]	
A	10.7540
B	11.2780
C	8.4580
D	6.6080

Leakage [pW]	
0.36	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	91.74	114.71	762.48	644.55
	rise	267.09	271.36	1046.23	906.04
B to Q	fall	91.69	114.64	809.39	710.61
	rise	297.31	299.35	1199.89	1017.07
C to Q	fall	30.64	33.11	549.46	438.73
	rise	196.47	198.51	764.26	667.57
D to Q	fall	10.89	13.37	453.14	386.38
	rise	135.92	138.81	684.94	590.73

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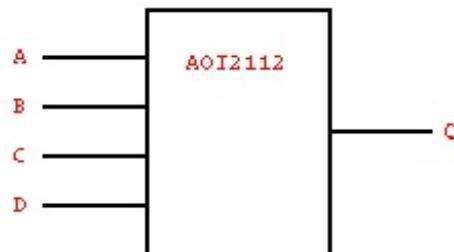
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2112
Cell Area	127.400 um ²
Equation	$Q = "!(D \mid C) \mid (B \cdot A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	L	H
H	H	-	-	L
-	L	L	L	H
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.09	0.52	0.24	1.10
	rise	0.15	0.92	0.42	1.47
B to Q	fall	0.10	0.53	-0.03	0.75
	rise	0.17	0.94	0.64	1.58
C to Q	fall	0.10	0.61	0.42	1.43
	rise	0.13	0.90	0.48	1.60
D to Q	fall	0.07	0.57	0.16	1.33
	rise	0.09	0.86	0.61	1.85

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.12	0.69	0.88	1.49
	rise	0.13	1.28	0.75	1.69
B to Q	fall	0.12	0.69	0.84	1.37
	rise	0.16	1.31	0.80	1.72
C to Q	fall	0.10	0.78	0.73	1.53
	rise	0.16	1.31	0.67	1.72
D to Q	fall	0.07	0.75	0.59	1.48
	rise	0.15	1.31	0.59	1.78

Capacitance [fF]	
A	21.0610
B	21.3360
C	16.5750
D	12.2460

Leakage [pW]	
	0.52

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	89.22	132.85	1432.78	1219.16
	rise	506.15	518.48	2097.66	1818.66
B to Q	fall	89.81	133.26	1532.16	1344.07
	rise	568.67	574.90	2399.41	2039.69
C to Q	fall	-0.01	-0.04	1020.12	822.45
	rise	372.79	379.94	1508.53	1325.54
D to Q	fall	0.00	0.00	818.31	714.64
	rise	251.70	258.05	1342.53	1170.88

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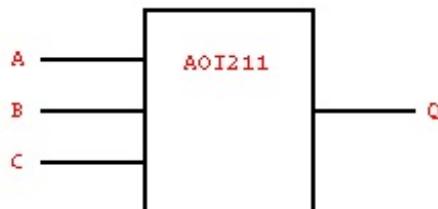
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	211
Cell Area	72.800 um ²
Equation	$Q = "!(A \& B) C"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	L	H
H	H	-	L
-	L	L	H
-	-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.50	0.04
	rise	0.12	0.90	0.63
B to Q	fall	0.08	0.51	-0.17
	rise	0.14	0.92	0.82
C to Q	fall	0.07	0.58	0.15
	rise	0.09	0.87	0.69

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.09	0.67	0.75
	rise	0.12	1.29	0.64
B to Q	fall	0.09	0.67	0.72
	rise	0.15	1.31	0.67
C to Q	fall	0.07	0.77	0.63
	rise	0.14	1.31	0.61

Capacitance [fF]	
A	8.3400
B	9.0140
C	6.5150

Leakage [pW]	
0.42	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	55.58	65.99	596.03	527.77
	rise	149.21	153.17	845.73	715.65
B to Q	fall	55.48	66.02	612.71	571.64
	rise	179.52	181.12	966.62	805.88
C to Q	fall	6.93	8.66	420.28	351.92
	rise	99.71	101.18	617.03	527.84

Databook Build Date: Wednesday Jun 18 17:26 2014

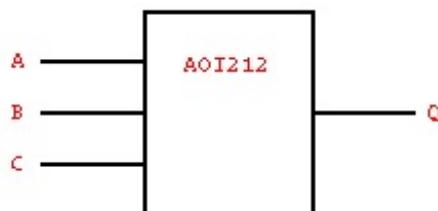
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	212
Cell Area	91.000 um ²
Equation	$Q = "!(A \& B) C"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	L	H
H	H	-	L
-	L	L	H
-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.48	-0.06	0.92
	rise	0.11	0.90	0.72	1.84
B to Q	fall	0.07	0.48	-0.25	0.60
	rise	0.13	0.92	0.91	1.92
C to Q	fall	0.06	0.56	0.16	1.32
	rise	0.09	0.88	0.64	1.92

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.64	0.68	1.40
	rise	0.11	1.29	0.60	1.66
B to Q	fall	0.08	0.64	0.65	1.26
	rise	0.14	1.32	0.61	1.67
C to Q	fall	0.06	0.74	0.59	1.49
	rise	0.14	1.32	0.57	1.79

Capacitance [fF]	
A	13.7030
B	15.1600
C	13.3960

Leakage [pW]	
0.61	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	72.32	88.31	1018.51	930.39
	rise	272.88	282.91	1566.41	1312.77
B to Q	fall	72.36	88.29	1028.39	999.03
	rise	338.42	343.56	1780.46	1476.10
C to Q	fall	0.00	0.00	816.31	702.52
	rise	210.10	214.37	1269.35	1107.11

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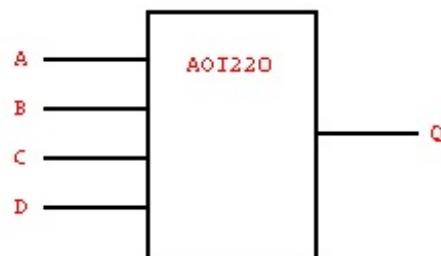
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	220
Cell Area	91.000 um ²
Equation	$Q = "!(B \& A) (D \& C)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	-	H
L	-	-	L	H
H	H	-	-	L
-	L	L	-	H
-	L	-	L	H
-	-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	0.13	0.56	0.24
	rise	0.19	0.99	0.77
B to Q	fall	0.13	0.57	0.01
	rise	0.21	1.01	0.94
C to Q	fall	0.07	0.49	-0.07
	rise	0.11	0.91	0.99
D to Q	fall	0.07	0.50	-0.26
	rise	0.13	0.92	1.16
				2.21

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	0.15	0.75	0.89
	rise	0.19	1.38	0.73
B to Q	fall	0.15	0.75	0.83
	rise	0.22	1.41	0.75
C to Q	fall	0.08	0.68	0.67
	rise	0.18	1.38	0.62
D to Q	fall	0.08	0.68	0.63
	rise	0.21	1.41	0.64
				1.80

Capacitance [fF]	
A	4.7410
B	5.1560
C	4.3840
D	4.6270

Leakage [pW]	
	0.46

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	53.65	62.36	329.65
	rise	111.56	113.47	444.22
B to Q	fall	53.55	62.37	335.03
	rise	126.57	127.71	504.42
C to Q	fall	4.93	5.57	235.94
	rise	73.40	75.38	398.23
D to Q	fall	4.95	5.56	237.87
	rise	88.29	89.52	450.05
				379.01

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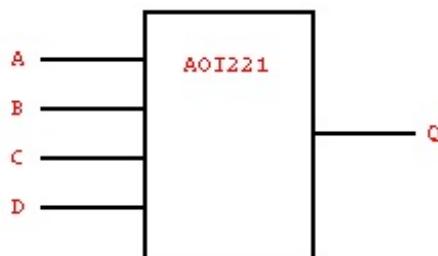
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	221
Cell Area	91.000 um ²
Equation	$Q = "!(B \& A) (D \& C)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	-	H
L	-	-	L	H
H	H	-	-	L
-	L	L	-	H
-	L	-	L	H
-	-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.11	0.53	0.20
	rise	0.17	0.95	0.72
B to Q	fall	0.11	0.54	-0.03
	rise	0.19	0.97	0.90
C to Q	fall	0.06	0.47	-0.10
	rise	0.11	0.89	0.95
D to Q	fall	0.07	0.48	-0.28
	rise	0.12	0.90	1.13
				2.17

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.13	0.71	0.85
	rise	0.17	1.33	0.69
B to Q	fall	0.13	0.71	0.79
	rise	0.19	1.36	0.71
C to Q	fall	0.07	0.65	0.64
	rise	0.16	1.33	0.59
D to Q	fall	0.07	0.65	0.61
	rise	0.19	1.36	0.60

Capacitance [fF]		Leakage [pW]
A		8.0620
B		8.9230
C		7.3920
D		8.1030

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	82.95	96.67	637.58
	rise	198.53	202.09	880.37
B to Q	fall	82.98	96.70	649.39
	rise	228.18	230.29	1002.59
C to Q	fall	4.88	6.37	463.33
	rise	131.33	135.40	783.13
D to Q	fall	4.79	6.37	467.92
	rise	160.90	163.12	887.00
				748.89

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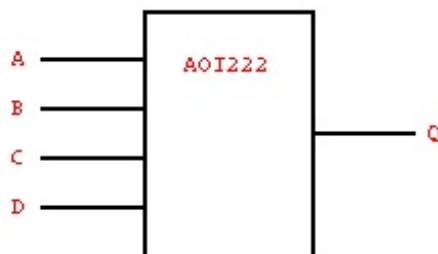
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	222
Cell Area	109.200 um ²
Equation	$Q = "!(B \& A) (D \& C)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	L	-	H
L	-	-	L	H
H	H	-	-	L
-	L	L	-	H
-	L	-	L	H
-	-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.10	0.52	0.16	1.06
	rise	0.15	0.93	0.68	1.73
B to Q	fall	0.10	0.52	-0.05	0.73
	rise	0.17	0.95	0.87	1.82
C to Q	fall	0.06	0.47	-0.11	0.93
	rise	0.10	0.88	0.92	2.09
D to Q	fall	0.06	0.47	-0.29	0.62
	rise	0.12	0.90	1.10	2.16

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.11	0.68	0.81	1.46
	rise	0.15	1.32	0.66	1.69
B to Q	fall	0.11	0.68	0.76	1.32
	rise	0.17	1.34	0.68	1.70
C to Q	fall	0.07	0.64	0.62	1.38
	rise	0.15	1.32	0.56	1.74
D to Q	fall	0.07	0.64	0.59	1.24
	rise	0.17	1.34	0.57	1.74

Capacitance [fF]	
A	14.7620
B	16.3640
C	13.0770
D	14.8410

Leakage [pW]	
	0.82

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	138.37	159.52	1229.50	1084.39
	rise	342.13	350.20	1708.23	1459.33
B to Q	fall	138.35	159.52	1255.16	1173.80
	rise	402.40	406.32	1951.67	1637.74
C to Q	fall	16.08	19.55	908.09	868.77
	rise	219.02	227.51	1505.79	1289.99
D to Q	fall	15.95	19.52	919.23	935.63
	rise	278.59	283.64	1710.78	1440.92

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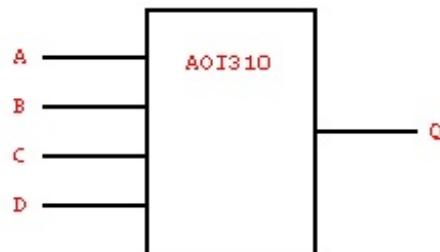
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	310
Cell Area	91.000 um ²
Equation	$Q = "!(B \& A) \& C D"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	L	H
H	H	H	-	L
-	L	-	L	H
-	-	L	L	H
-	-	-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.10	0.50	-0.40
	rise	0.21	1.01	1.15
B to Q	fall	0.09	0.50	-0.21
	rise	0.19	0.98	0.98
C to Q	fall	0.08	0.48	-0.06
	rise	0.15	0.95	0.80
D to Q	fall	0.08	0.57	0.19
	rise	0.15	0.95	0.91

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.11	0.67	0.74
	rise	0.23	1.42	0.73
B to Q	fall	0.11	0.67	0.79
	rise	0.19	1.38	0.69
C to Q	fall	0.12	0.67	0.80
	rise	0.15	1.34	0.67
D to Q	fall	0.12	0.77	0.79
	rise	0.23	1.42	0.71

Capacitance [fF]	
A	6.0660
B	5.6440
C	5.5020
D	4.3110

Leakage [pW]	
0.36	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	38.43	44.49	337.68
	rise	140.75	142.94	590.66
B to Q	fall	38.28	44.50	326.86
	rise	118.69	120.10	528.00
C to Q	fall	38.33	44.48	322.42
	rise	93.03	96.67	473.06
D to Q	fall	5.46	6.22	230.45
	rise	72.18	73.45	347.74

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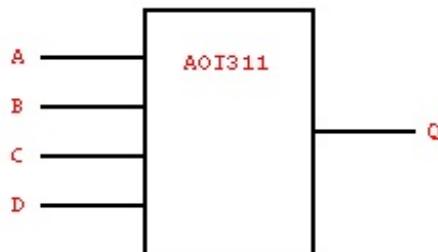
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	311
Cell Area	91.000 um ²
Equation	$Q = "!(B \& A) \& C D"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	L	H
H	H	H	-	L
-	L	-	L	H
-	-	L	L	H
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.09	0.47	-0.42	0.30
	rise	0.20	0.98	1.12	1.98
B to Q	fall	0.08	0.47	-0.24	0.58
	rise	0.17	0.95	0.95	1.89
C to Q	fall	0.07	0.46	-0.10	0.79
	rise	0.13	0.92	0.77	1.81
D to Q	fall	0.07	0.60	0.24	1.35
	rise	0.14	0.92	0.83	2.02

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.10	0.63	0.72	1.21
	rise	0.21	1.38	0.69	1.70
B to Q	fall	0.10	0.63	0.76	1.30
	rise	0.17	1.34	0.66	1.67
C to Q	fall	0.10	0.63	0.77	1.40
	rise	0.13	1.30	0.64	1.65
D to Q	fall	0.12	0.82	0.78	1.58
	rise	0.21	1.38	0.69	1.86

Capacitance [fF]	
A	10.5870
B	9.5330
C	9.2770
D	6.8700

Leakage [pW]	
0.47	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	56.24	65.13	661.42	644.34
	rise	267.71	272.57	1189.30	1006.77
B to Q	fall	56.07	65.12	638.09	603.51
	rise	222.75	225.97	1061.98	906.40
C to Q	fall	56.23	65.15	627.45	580.89
	rise	169.86	178.11	951.76	811.98
D to Q	fall	6.75	8.54	448.66	363.45
	rise	130.26	132.25	654.32	569.80

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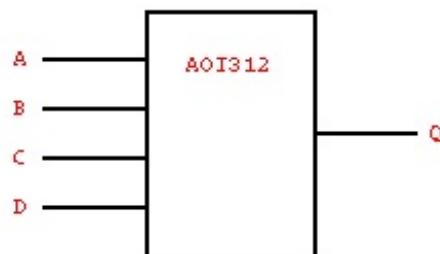
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	312
Cell Area	109.200 um ²
Equation	$Q = "!(B \& A) \& C D"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	L	H
H	H	H	-	L
-	L	-	L	H
-	-	L	L	H
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.46	-0.44	0.29
	rise	0.19	0.97	1.10	1.97
B to Q	fall	0.08	0.46	-0.25	0.57
	rise	0.16	0.94	0.92	1.88
C to Q	fall	0.06	0.45	-0.12	0.78
	rise	0.12	0.91	0.74	1.80
D to Q	fall	0.06	0.58	0.20	1.31
	rise	0.13	0.91	0.81	2.01

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.09	0.61	0.70	1.20
	rise	0.19	1.36	0.66	1.68
B to Q	fall	0.09	0.61	0.74	1.29
	rise	0.15	1.32	0.63	1.65
C to Q	fall	0.09	0.61	0.74	1.39
	rise	0.11	1.28	0.61	1.63
D to Q	fall	0.10	0.78	0.76	1.55
	rise	0.19	1.36	0.65	1.84

Capacitance [fF]	
A	19.9080
B	17.7020
C	17.3940
D	12.1300

Leakage [pW]	
0.66	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	101.90	123.09	1299.69	1271.96
	rise	502.54	513.02	2334.62	1974.57
B to Q	fall	101.79	123.11	1249.19	1193.11
	rise	413.35	420.75	2082.16	1775.04
C to Q	fall	101.77	123.04	1226.41	1149.60
	rise	305.11	325.93	1864.58	1587.34
D to Q	fall	0.00	0.00	862.72	708.99
	rise	234.25	239.62	1278.30	1115.06

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	109.200 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		60.00	1920.00	60.00	1920.00
A to Q	fall	0.17	0.70	0.98	1.58
	rise	0.14	0.94	0.18	1.01

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		60.00	1920.00	60.00	1920.00
A to Q	fall	0.06	0.71	0.15	0.75
	rise	0.07	1.27	0.14	1.30

Capacitance [fF]	
A	12.5450

Leakage [pW]	
	2.10

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		60.00	1920.00	60.00	1920.00
A to Q	fall	633.99	650.48	2550.52	2276.07
	rise	484.04	493.21	2215.96	2055.25

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	145.600 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	0.16	0.68	0.95	1.55
	rise	0.13	0.93	0.15	0.99

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	0.06	0.71	0.15	0.75
	rise	0.07	1.27	0.14	1.31

Capacitance [fF]	
A	17.4810

Leakage [pW]	
	2.80

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	797.58	827.31	3265.36	2984.69
	rise	594.48	607.20	2808.53	2686.05

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	54.600 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.22	0.76	1.15	1.76
	rise	0.16	0.97	0.16	0.99

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.08	0.73	0.16	0.77
	rise	0.09	1.29	0.16	1.32

Capacitance [fF]	
A	2.9010

Leakage [pW]	
	0.56

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	142.97	144.51	459.14	409.83
	rise	104.08	102.81	390.73	357.63

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	72.800 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.19	0.73	1.02	1.64
	rise	0.16	0.96	0.21	1.06

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.07	0.72	0.16	0.77
	rise	0.08	1.28	0.15	1.31

Capacitance [fF]	
A	4.8400

Leakage [pW]	
	0.96

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	233.83	238.60	873.65	777.93
	rise	177.43	174.83	759.48	691.15

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	72.800 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		30.00	960.00	30.00
A to Q	fall	0.18	0.71	0.99
	rise	0.15	0.95	0.20
				1.60
				1.04

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		30.00	960.00	30.00
A to Q	fall	0.06	0.71	0.15
	rise	0.07	1.27	0.14
				0.75
				1.30

Capacitance [fF]	
A	7.0210

Leakage [pW]	
	1.15

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		30.00	960.00	30.00
A to Q	fall	321.31	327.82	1282.81
	rise	253.63	252.50	1125.89
				1141.09
				1035.34

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	91.000 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.18	0.70	0.99	1.59
	rise	0.15	0.95	0.20	1.03

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.07	0.70	0.15	0.75
	rise	0.08	1.27	0.15	1.30

Capacitance [fF]	
A	8.8220

Leakage [pW]	
	1.55

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	469.42	479.52	1753.96	1565.78
	rise	357.94	356.01	1521.81	1401.86

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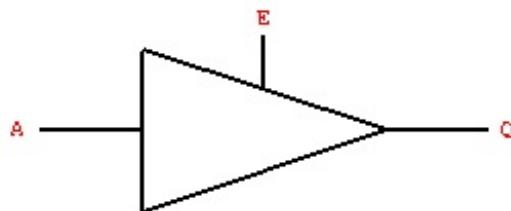
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	10
Cell Area	273.000 um ²
Equation	$Q = "A", \text{ when } !(E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	67.7814	1617.7866	67.7814	1617.7866	
A to Q	fall	0.18	0.75	0.96	1.68
	rise	0.16	0.98	0.14	1.04
E to Q	fall	0.13	0.70	0.12	0.68
	rise	0.11	0.91	0.03	1.02

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	67.7814	1617.7866	67.7814	1617.7866	
A to Q	fall	0.07	0.72	0.14	0.80
	rise	0.08	1.27	0.14	1.33
E to Q	fall	0.07	0.72	0.07	0.71
	rise	0.07	1.27	0.19	1.33

Capacitance [fF]	
A	21.1330
E	30.9940
Q	17.7840

Leakage [pW]	
	2.95

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	67.7814	1617.7866	67.7814	1617.7866
A to Q	fall	832.27	989.89	3180.43
	rise	463.18	530.02	2299.52
E to Q	fall	463.08	609.58	2438.46
	rise	382.84	403.77	2539.46
				3814.97

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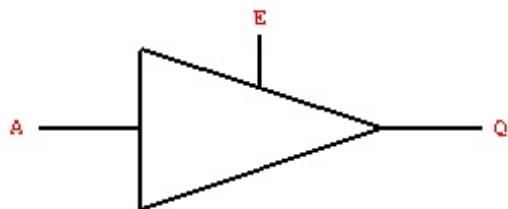
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	327.600 μm^2
Equation	$Q = "A"$, when $!(E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	79.7454	1939.7522	79.7454	1939.7522
A to Q	fall	0.18	0.74	0.95
	rise	0.16	0.97	0.13
E to Q	fall	0.13	0.68	0.09
	rise	0.11	0.91	0.03

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	79.7454	1939.7522	79.7454	1939.7522
A to Q	fall	0.07	0.71	0.14
	rise	0.08	1.27	0.14
E to Q	fall	0.06	0.71	0.07
	rise	0.07	1.27	0.19

Capacitance [fF]	
A	25.1480
E	37.6300
Q	19.7490

Leakage [pW]	
3.66	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	79.7454	1939.7522	79.7454	1939.7522
A to Q	fall	992.37	1178.09	3801.45
	rise	510.44	591.93	2708.67
E to Q	fall	494.58	667.22	2852.88
	rise	410.36	434.52	3025.26

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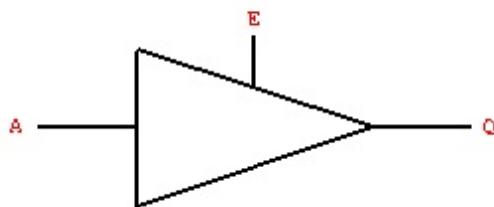
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	364.000 um ²
Equation	$Q = "A", \text{when } !(\neg E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	101.8975	2426.9056	101.8975	2426.9056	
A to Q	fall	0.18	0.73	0.94	1.66
	rise	0.16	0.97	0.12	1.02
E to Q	fall	0.13	0.68	0.08	0.63
	rise	0.11	0.91	0.03	1.02

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	101.8975	2426.9056	101.8975	2426.9056	
A to Q	fall	0.07	0.71	0.14	0.80
	rise	0.08	1.27	0.14	1.33
E to Q	fall	0.06	0.71	0.07	0.71
	rise	0.07	1.27	0.19	1.33

Capacitance [fF]	
A	31.6230
E	46.5700
Q	26.9020

Leakage [pW]	
4.42	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	101.8975	2426.9056	101.8975	2426.9056
A to Q	fall	1230.62	1455.00	4737.05
	rise	638.42	723.42	3393.72
E to Q	fall	616.01	821.83	3535.41
	rise	514.10	544.38	3785.55
				5672.43

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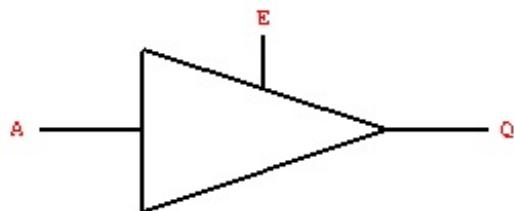
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2
Cell Area	145.600 um ²
Equation	Q = "A", when !(E)
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		16.8647	326.867	16.8647	326.867
A to Q	fall	0.22	0.80	1.03	1.76
	rise	0.20	1.02	0.20	1.10
E to Q	fall	0.16	0.74	0.15	0.71
	rise	0.13	0.95	0.10	1.09

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		16.8647	326.867	16.8647	326.867
A to Q	fall	0.08	0.74	0.16	0.82
	rise	0.09	1.29	0.16	1.34
E to Q	fall	0.08	0.74	0.08	0.73
	rise	0.09	1.29	0.21	1.35

Capacitance [fF]	
A	5.4050
E	8.4500
Q	6.8660

Leakage [pW]	
	0.97

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		16.8647	326.867	16.8647	326.867
A to Q	fall	205.39	238.44	673.61	723.37
	rise	122.87	134.71	492.81	566.59
E to Q	fall	129.90	163.16	515.66	598.66
	rise	107.49	113.58	552.64	768.11

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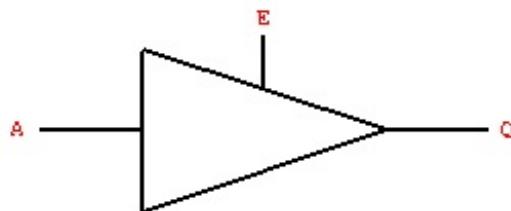
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	163.800 um ²
Equation	$Q = "A"$, when $!(E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2294	647.2315	27.2294	647.2315	
A to Q	fall	0.20	0.78	0.99	1.72
	rise	0.18	1.00	0.17	1.08
E to Q	fall	0.14	0.72	0.16	0.73
	rise	0.12	0.93	0.06	1.06

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2294	647.2315	27.2294	647.2315	
A to Q	fall	0.07	0.73	0.14	0.81
	rise	0.08	1.28	0.14	1.33
E to Q	fall	0.07	0.73	0.07	0.72
	rise	0.08	1.28	0.19	1.33

Capacitance [fF]	
A	9.1180
E	13.8850
Q	7.2300

Leakage [pW]	
	1.43

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2294	647.2315	27.2294	647.2315	
A to Q	fall	363.49	433.93	1306.36	1414.50
	rise	200.26	227.66	939.92	1106.63
E to Q	fall	199.19	268.45	1003.50	1184.73
	rise	170.71	182.41	1034.70	1520.73

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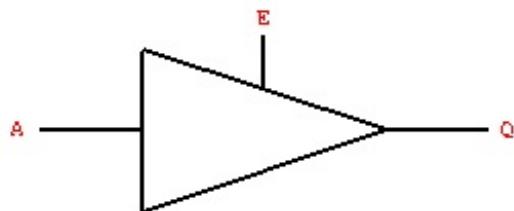
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	182.000 um ²
Equation	$Q = "A", \text{ when } !(E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6728	38.67	968.6728
A to Q	fall	0.18	0.74	0.95 1.67
	rise	0.16	0.97	0.13 1.04
E to Q	fall	0.13	0.69	0.13 0.68
	rise	0.11	0.91	0.03 1.02

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6728	38.67	968.6728
A to Q	fall	0.07	0.71	0.14 0.80
	rise	0.07	1.27	0.14 1.32
E to Q	fall	0.06	0.71	0.07 0.71
	rise	0.07	1.27	0.18 1.33

Capacitance [fF]	
A	12.8740
E	19.4390
Q	8.6710

Leakage [pW]	
	1.74

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6728	38.67	968.6728
A to Q	fall	485.39	581.40	1897.35 2062.75
	rise	272.22	313.65	1372.41 1649.60
E to Q	fall	267.19	357.47	1460.57 1733.98
	rise	228.60	245.21	1509.52 2279.85

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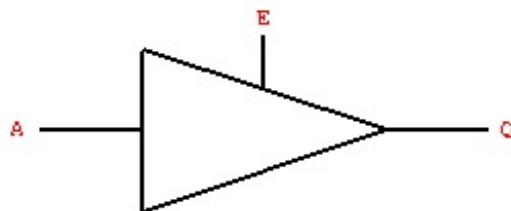
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	254.800 um ²
Equation	$Q = "A", \text{ when } !(E)$
Type	Tristate
Input	A, E
Output	Q



State Table		
A	E	Q
L	H	L
H	H	H
-	L	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1884	1298.1938	58.1884	1298.1938
A to Q	fall	0.19	0.76	0.97
	rise	0.17	0.98	0.15
E to Q	fall	0.14	0.71	0.14
	rise	0.11	0.91	0.04
				1.69
				1.05
				0.70
				1.02

Output Transition [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1884	1298.1938	58.1884	1298.1938
A to Q	fall	0.07	0.72	0.14
	rise	0.08	1.27	0.14
E to Q	fall	0.07	0.72	0.07
	rise	0.08	1.27	0.19
				0.80
				1.32
				0.71
				1.33

Capacitance [fF]	
A	17.3260
E	25.7350
Q	18.1910

Leakage [pW]	
	2.55

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1884	1298.1938	58.1884	1298.1938
A to Q	fall	704.82	833.57	2585.49
	rise	396.64	444.97	1869.15
E to Q	fall	416.33	536.63	2010.18
	rise	333.72	351.47	2068.17
				2804.14
				2218.61
				2372.51
				3065.87

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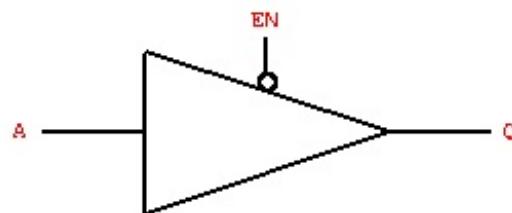
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	10
Cell Area	273.000 um ²
Equation	$Q = "A", \text{ when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	67.7813	1617.7863	67.7813	1617.7863	
A to Q	fall	0.18	0.75	0.95	1.67
	rise	0.17	0.98	0.13	1.04
EN to Q	fall	0.13	0.68	0.99	1.76
	rise	0.19	1.00	0.93	1.75

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	67.7813	1617.7863	67.7813	1617.7863	
A to Q	fall	0.07	0.72	0.14	0.80
	rise	0.08	1.27	0.14	1.33
EN to Q	fall	0.06	0.72	0.13	0.79
	rise	0.08	1.27	0.09	1.27

Capacitance [fF]	
A	21.1530
EN	27.0440
Q	17.7840

Leakage [pW]	
2.95	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	67.7813	1617.7863	67.7813	1617.7863
A to Q	fall	767.30	907.18	3123.80
	rise	532.93	601.90	2345.92
EN to Q	fall	597.74	725.08	3007.19
	rise	861.70	901.17	2917.78
				3208.83

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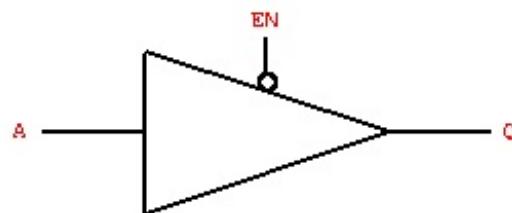
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	327.600 um ²
Equation	$Q = "A", \text{ when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	79.6368	1939.6434	79.6368	1939.6434	
A to Q	fall	0.18	0.73	0.94	1.66
	rise	0.16	0.97	0.12	1.03
EN to Q	fall	0.12	0.66	0.97	1.74
	rise	0.19	1.00	0.92	1.73

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	79.6368	1939.6434	79.6368	1939.6434	
A to Q	fall	0.06	0.71	0.14	0.80
	rise	0.08	1.27	0.14	1.33
EN to Q	fall	0.06	0.71	0.13	0.78
	rise	0.08	1.27	0.09	1.27

Capacitance [fF]	
A	25.1580
EN	32.8180
Q	19.6400

Leakage [pW]	
3.66	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	79.6368	1939.6434	79.6368	1939.6434
A to Q	fall	912.24	1078.43	3734.25
	rise	590.40	676.63	2761.01
EN to Q	fall	689.75	834.83	3549.98
	rise	989.30	1028.58	3437.24
				4432.54
				3796.24

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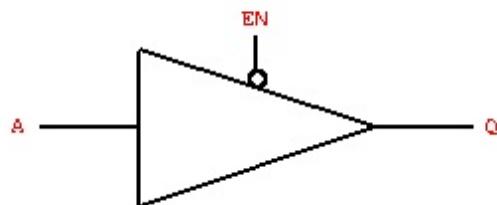
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	364.000 um ²
Equation	$Q = "A", \text{when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	101.9471	2426.9556	101.9471	2426.9556	
A to Q	fall	0.17	0.73	0.94	1.65
	rise	0.16	0.97	0.12	1.02
EN to Q	fall	0.12	0.66	0.97	1.73
	rise	0.18	0.99	0.91	1.72

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	101.9471	2426.9556	101.9471	2426.9556	
A to Q	fall	0.06	0.71	0.14	0.80
	rise	0.08	1.27	0.14	1.33
EN to Q	fall	0.06	0.71	0.13	0.79
	rise	0.08	1.27	0.09	1.27

Capacitance [fF]	
A	31.6310
EN	40.2700
Q	26.9510

Leakage [pW]	
4.42	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	101.9471	2426.9556	101.9471	2426.9556
A to Q	fall	1131.62	1330.30	4649.96
	rise	741.79	849.33	3464.87
EN to Q	fall	866.70	1037.62	4456.75
	rise	1233.55	1288.63	4297.79
				4755.07

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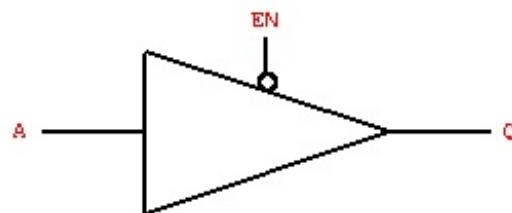
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2
Cell Area	145.600 um ²
Equation	$Q = "A", \text{ when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	16.8647	326.8671	16.8647	326.8671
A to Q	fall	0.22	0.80	1.03
	rise	0.20	1.02	0.20
EN to Q	fall	0.15	0.71	1.17
	rise	0.25	1.07	1.15

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	16.8647	326.8671	16.8647	326.8671
A to Q	fall	0.08	0.74	0.16
	rise	0.09	1.29	0.16
EN to Q	fall	0.07	0.73	0.15
	rise	0.10	1.29	0.11

Capacitance [fF]	
A	5.3980
EN	7.2200
Q	6.8660

Leakage [pW]	
0.97	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	16.8647	326.8671	16.8647	326.8671
A to Q	fall	193.40	222.87	663.37
	rise	135.92	152.43	501.91
EN to Q	fall	164.33	196.11	649.07
	rise	227.14	237.32	652.36

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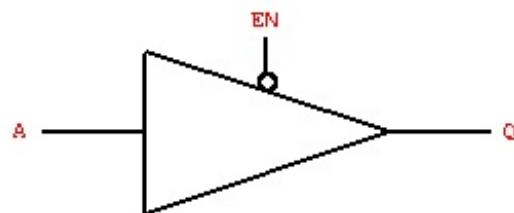
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	163.800 um ²
Equation	$Q = "A"$, when !(EN)
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2293	647.2315	27.2293	647.2315	
A to Q	fall	0.20	0.78	0.99	1.72
	rise	0.18	1.00	0.17	1.08
EN to Q	fall	0.13	0.69	1.03	1.80
	rise	0.22	1.04	0.99	1.82

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2293	647.2315	27.2293	647.2315	
A to Q	fall	0.07	0.73	0.14	0.81
	rise	0.08	1.28	0.14	1.33
EN to Q	fall	0.06	0.72	0.14	0.79
	rise	0.09	1.28	0.09	1.28

Capacitance [fF]	
A	9.1100
EN	12.2730
Q	7.2300

Leakage [pW]	
1.44	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	27.2293	647.2315	27.2293	647.2315	
A to Q	fall	339.84	403.00	1285.29	1384.13
	rise	226.44	260.54	958.96	1136.20
EN to Q	fall	256.49	316.76	1219.70	1497.85
	rise	374.39	397.47	1203.64	1318.66

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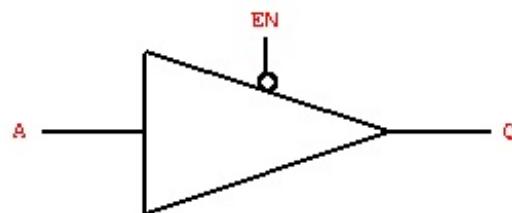
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	182.000 um ²
Equation	$Q = "A", \text{ when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6727	38.67	968.6727
A to Q	fall	0.18	0.74	0.95 1.67
	rise	0.16	0.98	0.13 1.04
EN to Q	fall	0.12	0.67	1.00 1.76
	rise	0.20	1.01	0.95 1.77

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6727	38.67	968.6727
A to Q	fall	0.06	0.71	0.14 0.80
	rise	0.08	1.27	0.14 1.32
EN to Q	fall	0.06	0.71	0.13 0.78
	rise	0.08	1.27	0.09 1.27

Capacitance [fF]	
A	12.8810
EN	16.8790
Q	8.6710

Leakage [pW]	
1.74	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	38.67	968.6727	38.67	968.6727
A to Q	fall	447.25	531.18	1862.97 2013.96
	rise	313.62	364.97	1398.69 1697.52
EN to Q	fall	347.66	426.59	1793.34 2214.63
	rise	528.48	554.49	1765.72 1944.09

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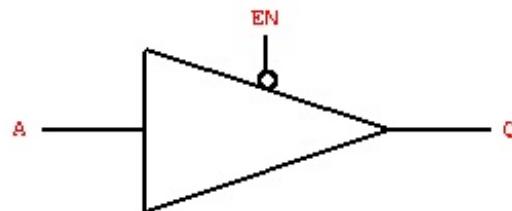
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	254.800 um ²
Equation	$Q = "A", \text{ when } !(EN)$
Type	Tristate
Input	A, EN
Output	Q



State Table		
A	EN	Q
L	L	L
H	L	H
-	H	Z

Propagation Delay [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1883	1298.1941	58.1883	1298.1941
A to Q	fall	0.19	0.75	0.97
	rise	0.17	0.98	0.15
EN to Q	fall	0.14	0.68	1.01
	rise	0.20	1.01	0.95
				1.69
				1.04
				1.78
				1.76

Output Transition [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1883	1298.1941	58.1883	1298.1941
A to Q	fall	0.07	0.72	0.14
	rise	0.08	1.27	0.14
EN to Q	fall	0.06	0.72	0.14
	rise	0.08	1.27	0.09
				0.80
				1.32
				0.79
				1.27

Capacitance [fF]	
A	17.3330
EN	22.5060
Q	18.1910

Leakage [pW]	
2.55	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	58.1883	1298.1941	58.1883	1298.1941
A to Q	fall	653.21	767.32	2540.63
	rise	451.18	512.68	1908.90
EN to Q	fall	528.39	634.45	2462.32
	rise	728.99	761.34	2377.47
				2739.78
				2281.90
				3016.42
				2607.94

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Cell Area	54.600 um ²
Type	Physical
InOut	A



Capacitance [fF]	
A	34.9630

Leakage [pW]	
	0.28

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	109.200 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	0.17	0.70	0.87
	rise	0.16	0.97	1.47
		0.35	1.19	

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	0.06	0.71	0.16
	rise	0.08	1.27	0.15
				0.75

Capacitance [fF]	
A	11.5950

Leakage [pW]	
	2.07

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	629.44	645.49	2435.57
	rise	503.36	493.84	2222.66
				1932.34

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	145.600 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	0.16	0.68	0.84	1.44
	rise	0.15	0.96	0.33	1.16

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	0.06	0.71	0.15	0.76
	rise	0.08	1.27	0.15	1.30

Capacitance [fF]	
A	16.2380

Leakage [pW]	
	2.76

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		75.00	2400.00	75.00	2400.00
A to Q	fall	787.04	817.54	3110.69	2790.18
	rise	610.85	597.25	2812.96	2516.58

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	54.600 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.23	0.89	1.11	1.84
A to Q	rise	0.17	0.98	0.24	1.09

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.91	0.17	0.95
A to Q	rise	0.09	1.29	0.17	1.32

Capacitance [fF]	
A	3.3160

Leakage [pW]	
	0.53

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	136.22	138.53	431.93	385.78
A to Q	rise	99.59	97.68	368.12	332.84

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	72.800 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.19	0.86	0.93	1.66
	rise	0.17	0.98	0.35	1.20

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.07	0.90	0.16	0.94
	rise	0.08	1.28	0.16	1.31

Capacitance [fF]	
A	4.7740

Leakage [pW]	
	0.90

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	215.68	221.04	797.21	706.18
	rise	169.03	163.61	713.11	630.22

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	72.800 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.18	0.83	0.89	1.61
	rise	0.16	0.97	0.34	1.19

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.07	0.88	0.15	0.92
	rise	0.08	1.27	0.15	1.30

Capacitance [fF]	
A	6.6450

Leakage [pW]	
	1.08

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	291.94	299.40	1163.90	1029.31
	rise	247.17	238.61	1060.78	942.68

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	91.000 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.19	0.83	0.89	1.61
	rise	0.16	0.96	0.34	1.18

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.07	0.89	0.16	0.93
	rise	0.08	1.27	0.16	1.30

Capacitance [fF]	
A	8.2180

Leakage [pW]	
	1.44

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	431.42	442.39	1591.42	1415.91
	rise	340.19	334.32	1421.44	1273.86

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Cell Area	36.400 um ²
Equation	$Q = "!"A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.05	0.61	-0.11	1.24
	rise	0.08	0.93	0.79	2.20

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.06	0.81	0.57	1.57
	rise	0.10	1.39	0.56	1.89

Capacitance [fF]	
A	3.7310

Leakage [pW]	
	0.20

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	6.02	6.29	157.66	121.40
	rise	34.43	34.67	239.96	191.26

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	10
Cell Area	91.000 um ²
Equation	$Q = \text{!A}$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.04	0.67	-0.05
	rise	0.05	0.84	0.53
				2.00

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.04	0.89	0.50
	rise	0.06	1.27	0.48
				1.63
				1.82

Capacitance [fF]	
A	38.3370

Leakage [pW]	
	1.44

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.00	0.00	2942.12
	rise	382.34	390.59	4273.18
				3422.52

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	91.000 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	0.04	0.66	-0.05
	rise	0.04	0.84	1.40
		0.53	2.00	

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	0.04	0.88	0.50
	rise	0.06	1.27	1.62
		0.48	1.81	

Capacitance [fF]	
A	45.1990

Leakage [pW]	
	1.56

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00
A to Q	fall	0.00	0.00	3517.61
	rise	452.30	465.29	2654.19
		5124.00	4103.14	

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	109.200 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	75.00	2400.00	75.00	2400.00
A to Q	fall	0.04	0.66	-0.05
	rise	0.05	0.84	0.53
				2.00

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	75.00	2400.00	75.00	2400.00
A to Q	fall	0.04	0.88	0.50
	rise	0.06	1.27	0.48
				1.81

Capacitance [fF]	
A	56.4390

Leakage [pW]	
	1.96

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	75.00	2400.00	75.00	2400.00
A to Q	fall	0.00	0.00	4424.93
	rise	570.79	579.00	3339.11
				6414.35
				5134.28

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.05	0.70	-0.00	1.44
	rise	0.06	0.88	0.60	2.05

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.05	0.93	0.55	1.67
	rise	0.08	1.32	0.54	1.86

Capacitance [fF]	
A	5.1380

Leakage [pW]	
	0.26

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	6.45	7.07	310.13	230.04
	rise	50.71	51.41	440.08	350.66

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.05	0.68	-0.01	1.43
	rise	0.05	0.85	0.56	2.01

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.05	0.90	0.53	1.65
	rise	0.07	1.28	0.51	1.83

Capacitance [fF]	
A	8.1940

Leakage [pW]	
	0.35

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	3.02	4.54	612.56	458.08
	rise	90.08	90.75	869.90	695.05

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	3
Cell Area	36.400 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.04	0.67	-0.03	1.41
	rise	0.05	0.85	0.55	2.00

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.04	0.88	0.52	1.63
	rise	0.07	1.27	0.50	1.82

Capacitance [fF]	
A	11.5390

Leakage [pW]	
	0.42

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.00	0.00	904.44	680.28
	rise	130.63	134.50	1302.15	1041.45

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	54.600 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.04	0.68	-0.04	1.42
	rise	0.05	0.85	0.53	2.01

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.04	0.90	0.50	1.64
	rise	0.06	1.27	0.49	1.82

Capacitance [fF]	
A	15.9660

Leakage [pW]	
	0.67

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.00	0.00	1181.91	885.98
	rise	156.15	159.97	1708.59	1369.64

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	54.600 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.04	0.66	-0.05	1.40
	rise	0.04	0.84	0.53	2.00

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.04	0.88	0.49	1.62
	rise	0.06	1.26	0.47	1.81

Capacitance [fF]	
A	22.6800

Leakage [pW]	
	0.80

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.00	0.00	1745.67	1315.76
	rise	225.21	228.71	2560.44	2052.37

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	72.800 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		40.00	1280.00	40.00
A to Q	fall	0.04	0.67	-0.03
	rise	0.05	0.84	0.53
				1.42
				1.99

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		40.00	1280.00	40.00
A to Q	fall	0.04	0.89	0.51
	rise	0.06	1.26	0.49
				1.63
				1.81

Capacitance [fF]	
A	30.6100

Leakage [pW]	
	1.12

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		40.00	1280.00	40.00
A to Q	fall	0.00	0.00	2396.72
	rise	322.34	332.54	1800.54
				3438.33
				2759.11

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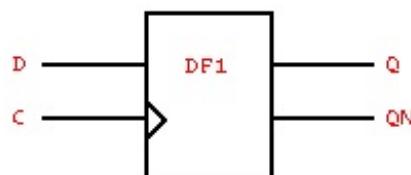
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	273.000 μm^2
Equation	$Q = "D"$ $QN = "!(D)"$
Clock	C
Type	Sequential
Input	D
Output	Q, QN



State Table						
C	D	$IQ_{(int)}$	$IQN_{(int)}$	Q	QN	
R	L	-	-	L	H	
R	H	-	-	H	L	
F	-	L	H	L	H	
F	-	H	L	H	L	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.56	1.10	0.76
	rise	0.49	1.31	0.71
C to QN	fall	0.57	1.10	0.79
	rise	0.65	1.47	0.85

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.07	0.74	0.07
	rise	0.09	1.32	0.09
C to QN	fall	0.06	0.74	0.06
	rise	0.09	1.32	0.09

Constraints Time [ns]		
Setup C to D	fall	0.97
	rise	0.23
Hold C to D	fall	0.67
	rise	0.90

Capacitance [fF]	
C	3.8350
D	4.5690

Leakage [pW]	
2.35	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	226.24	226.70	359.45
	rise	200.12	207.95	337.64
C to QN	fall	200.12	207.95	337.64
	rise	226.24	226.70	359.45

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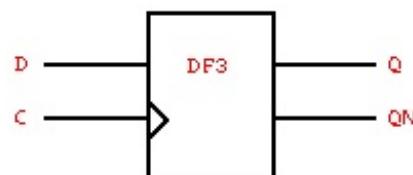
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3			
Strength	3			
Cell Area	273.000 μm^2			
Equation	$Q = "(D)"$ $QN = "!(D)"$			
Clock	C			
Type	Sequential			
Input	D			
Output	Q, QN			



State Table						
C	D	$IQ_{(\text{int})}$	$IQN_{(\text{int})}$	Q	QN	
R	L	-	-	L	H	
R	H	-	-	H	L	
F	-	L	H	L	H	
F	-	H	L	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.60	1.14	0.80	1.35
	rise	0.53	1.33	0.75	1.55
C to QN	fall	0.67	1.19	0.89	1.41
	rise	0.75	1.54	0.95	1.74

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.07	0.72	0.07	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.72	0.07	0.72
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to D	fall	0.97
	rise	0.23
Hold C to D	fall	0.67
	rise	0.91

Capacitance [fF]	
C	3.8330
D	4.5720

Leakage [pW]	
2.67	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	335.06	321.86	470.24	464.45
	rise	304.84	301.06	444.92	451.28
C to QN	fall	304.84	301.06	444.92	451.28
	rise	335.06	321.86	470.24	464.45

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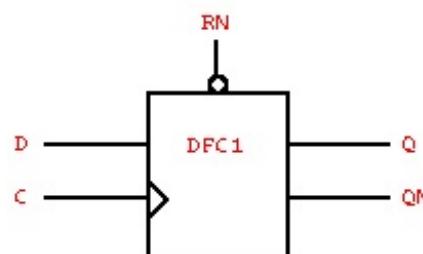
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	309.400 μm^2
Equation	$Q = "(!(!RN)*(D))"$ $QN = "((!RN)+!(D))"$
Clock	C
Reset	RN
Type	Sequential
Input	D
Output	Q, QN



State Table							
C	D	RN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	-	L	H	
R	H	H	-	-	H	L	
F	-	H	L	H	L	H	
F	-	H	H	L	H	L	
-	-	L	-	-	L	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.61	1.15	0.82	1.36
	rise	0.46	1.29	0.69	1.52
C to QN	fall	0.55	1.08	0.77	1.30
	rise	0.70	1.52	0.91	1.73
RN to Q	fall	0.17	0.72	1.14	1.75
RN to QN	rise	0.32	1.15	1.34	2.15

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.07	0.74	0.14	0.76
RN to QN	rise	0.10	1.32	0.11	1.32

Constraints Time [ns]		
Setup C to D	fall	1.01
	rise	0.27
Hold C to D	fall	0.65
	rise	0.93
Recovery C to RN	rise	0.99
Removal C to RN	rise	1.38

Capacitance [fF]	
C	3.8250
D	4.5960
RN	11.6760

Leakage [pW]	
2.41	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	252.02	252.17	386.35	395.16
	rise	204.73	216.35	341.94	367.46
C to QN	fall	204.73	216.35	341.94	367.46
	rise	252.02	252.17	386.35	395.16
RN to Q	fall	230.93	251.83	739.30	773.27
RN to QN	rise	230.93	251.83	739.30	773.27

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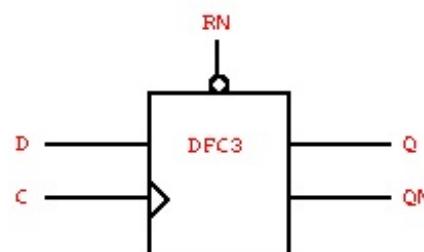
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	309.400 μm^2
Equation	$Q = "(!(!RN)*(D))"$ $QN = "((!RN)+!(D))"$
Clock	C
Reset	RN
Type	Sequential
Input	D
Output	Q, QN



State Table							
C	D	RN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	-	L	H	
R	H	H	-	-	H	L	
F	-	H	L	H	L	H	
F	-	H	H	L	H	L	
-	-	L	-	-	L	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.65	1.20	0.86	1.41
	rise	0.49	1.30	0.71	1.52
C to QN	fall	0.63	1.16	0.86	1.38
	rise	0.80	1.59	1.01	1.80
RN to Q	fall	0.22	0.76	1.26	1.84
RN to QN	rise	0.42	1.22	1.52	2.29

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.72	0.07	0.72
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.07	0.72	0.15	0.72
RN to QN	rise	0.10	1.28	0.10	1.28

Constraints Time [ns]		
Setup C to D	fall	1.00
	rise	0.26
Hold C to D	fall	0.65
	rise	0.93
Recovery C to RN	rise	1.33
Removal C to RN	rise	1.38

Capacitance [fF]	
C	3.8260
D	4.6040
RN	11.6690

Leakage [pW]	
2.72	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	366.15	347.52	502.65	491.74
	rise	306.10	309.82	445.96	459.39
C to QN	fall	306.10	309.82	445.96	459.39
	rise	366.15	347.52	502.65	491.74
RN to Q	fall	356.63	349.63	960.49	886.04
RN to QN	rise	356.63	349.63	960.49	886.04

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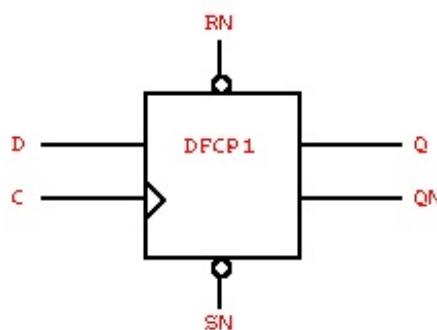
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	327.600 um ²
Equation	$Q = "(!(!RN)*(D)+(!SN))"$ $QN = "(!(!SN)*(!(D)+(!RN)))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table								
C	D	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	H	H	-	-	H	L	
F	-	H	H	L	H	L	H	
F	-	H	H	H	L	H	L	
-	-	L	L	-	-	L	L	
-	-	L	H	-	-	L	H	
-	-	H	L	-	-	H	L	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.62	1.17	0.83
	rise	0.48	1.30	0.71
C to QN	fall	0.60	1.13	0.83
	rise	0.69	1.51	0.90
RN to Q	fall	0.18	0.73	1.17
	rise	0.14	0.96	-0.11
RN to QN	rise	0.29	1.13	1.28
SN to Q	rise	0.36	1.18	1.37
SN to QN	fall	0.21	0.79	1.25
	rise	0.15	0.99	0.00

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.74	0.08
	rise	0.09	1.32	0.09
C to QN	fall	0.07	0.74	0.07
	rise	0.09	1.32	0.09
RN to Q	fall	0.07	0.74	0.14
	rise	0.09	1.32	0.14
RN to QN	rise	0.10	1.32	0.11
SN to Q	rise	0.09	1.32	0.10
SN to QN	fall	0.08	0.76	0.15
	rise	0.10	1.32	0.16

Constraints Time [ns]		
Setup C to D	fall	0.94
	rise	0.34
Hold C to D	fall	0.55
	rise	0.91
Recovery C to RN	rise	1.06
Removal C to RN	rise	1.32
Recovery C to SN	rise	0.73
Removal C to SN	rise	0.60

Capacitance [fF]	
C	3.8270
D	4.5750
RN	13.2940
SN	12.2800

Leakage [pW]	
2.57	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	260.52	262.37	394.29	405.15
	rise	234.57	245.37	372.98	395.80
C to QN	fall	234.57	245.37	372.98	395.80
	rise	260.52	262.37	394.29	405.15
RN to Q	fall	267.87	298.40	1041.10	1152.31
	rise	136.83	146.66	889.96	1248.10
RN to QN	rise	245.20	265.72	751.10	787.78
SN to Q	rise	268.72	274.44	800.57	805.17
SN to QN	fall	273.02	305.13	987.19	1084.06
	rise	144.39	159.61	785.23	1108.93

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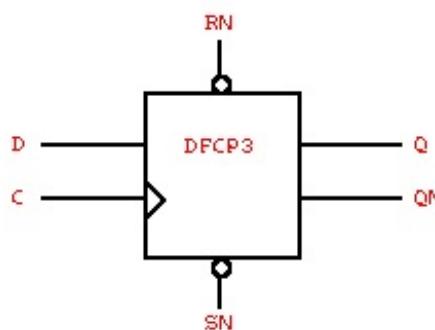
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	327.600 um ²
Equation	$Q = "(!(!RN)*(D)+(!SN))"$ $QN = "(!(!SN)*(!(D)+(!RN)))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table								
C	D	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	H	H	-	-	H	L	
F	-	H	H	L	H	L	H	
F	-	H	H	H	L	H	L	
-	-	L	L	-	-	L	L	
-	-	L	H	-	-	L	H	
-	-	H	L	-	-	H	L	

Propagation Delay [ns]								
Input Transition [ns]		0.01		4.00				
Load Capacitance [fF]	15.00	480.00	15.00	480.00				
C to Q	fall	0.67	1.23	0.88	1.44			
	rise	0.50	1.31	0.73	1.54			
C to QN	fall	0.69	1.23	0.91	1.46			
	rise	0.76	1.56	0.98	1.77			
RN to Q	fall	0.23	0.79	1.28	1.91			
	rise	0.16	0.97	-0.01	0.83			
RN to QN	rise	0.37	1.18	1.42	2.21			
SN to Q	rise	0.43	1.23	1.50	2.29			
SN to QN	fall	0.26	0.85	1.35	2.01			
	rise	0.18	0.99	0.08	0.93			

Output Transition [ns]								
Input Transition [ns]		0.01		4.00				
Load Capacitance [fF]	15.00	480.00	15.00	480.00				
C to Q	fall	0.08	0.74	0.08	0.74			
	rise	0.09	1.28	0.09	1.28			
C to QN	fall	0.08	0.74	0.08	0.74			
	rise	0.09	1.28	0.09	1.28			
RN to Q	fall	0.08	0.74	0.15	0.78			
	rise	0.09	1.28	0.15	1.32			
RN to QN	rise	0.10	1.28	0.10	1.28			
SN to Q	rise	0.09	1.28	0.10	1.28			
SN to QN	fall	0.09	0.75	0.17	0.79			
	rise	0.10	1.28	0.16	1.32			

Constraints Time [ns]		
Setup C to D	fall	0.93
	rise	0.34
Hold C to D	fall	0.55
	rise	0.91
Recovery C to RN	rise	1.36
Removal C to RN	rise	1.32
Recovery C to SN	rise	0.85
Removal C to SN	rise	0.60

Capacitance [fF]	
C	3.8290
D	4.5780
RN	13.2500
SN	12.2600

Leakage [pW]	
2.86	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	369.65	357.85	504.71	500.84
	rise	339.57	340.72	480.76	490.18
C to QN	fall	339.57	340.72	480.76	490.18
	rise	369.65	357.85	504.71	500.84
RN to Q	fall	379.30	396.05	1264.94	1263.44
	rise	221.72	227.05	1139.48	1354.76
RN to QN	rise	363.18	361.44	953.49	896.09
SN to Q	rise	381.84	370.95	977.50	913.97
SN to QN	fall	387.51	404.99	1201.35	1197.65
	rise	229.66	240.42	1037.95	1216.79

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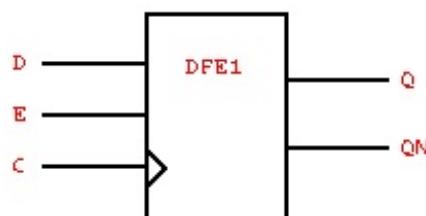
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	327.600 um ²
Equation	$Q = (((D * E) + !((!(PreviousFlipFlopState) + (D * E)) + (!D * E))))$ $QN = ((!(((D * E) + !((!(PreviousFlipFlopState) + (D * E)) + (!D * E)))) + (!D * E))))$
Clock	C
Type	Sequential
Input	D, E
Output	Q, QN



State Table						
C	D	E	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	-	L	H
R	H	H	-	-	H	L
F	-	H	L	H	L	H
F	-	H	H	L	H	L
-	-	L	L	H	L	H
-	-	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.55	1.10	0.72	1.28
	rise	0.51	1.33	0.72	1.55
C to QN	fall	0.61	1.14	0.82	1.36
	rise	0.66	1.48	0.84	1.65

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.07	0.75	0.07	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32

Constraints Time [ns]		
Setup C to D	fall	1.02
	rise	0.27
Hold C to D	fall	0.61
	rise	0.78
Setup C to E	fall	1.42
	rise	0.23
Hold C to E	fall	1.02
	rise	1.24

Capacitance [fF]	
C	3.6960
D	8.9860
E	6.8140

Leakage [pW]	
2.76	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	244.16	244.30	378.87	389.45
	rise	218.86	224.45	358.19	375.95
C to QN	fall	218.86	224.45	358.19	375.95
	rise	244.16	244.30	378.87	389.45

Databook Build Date: Wednesday Jun 18 17:26 2014

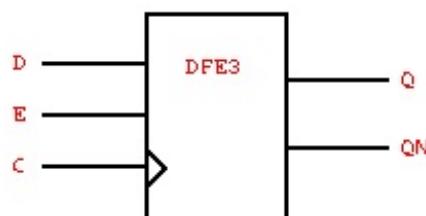
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3
Strength	3
Cell Area	345.800 um ²
Equation	$Q = (((D * E) + !((!(PreviousFlipFlopState) + (D * E)) + (!D * E))))$ $QN = ((!(((D * E) + !((!(PreviousFlipFlopState) + (D * E)) + (!D * E)))) + (!D * E))))$
Clock	C
Type	Sequential
Input	D, E
Output	Q, QN



State Table						
C	D	E	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	-	L	H
R	H	H	-	-	H	L
F	-	H	L	H	L	H
F	-	H	H	L	H	L
-	-	L	L	H	L	H
-	-	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.59	1.14	0.76	1.32
	rise	0.54	1.34	0.75	1.56
C to QN	fall	0.69	1.22	0.91	1.43
	rise	0.75	1.54	0.93	1.72

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to D	fall	1.02
	rise	0.26
Hold C to D	fall	0.62
	rise	0.78
Setup C to E	fall	1.41
	rise	0.23
Hold C to E	fall	1.02
	rise	1.24

Capacitance [fF]	
C	3.7020
D	8.8990
E	6.8000

Leakage [pW]	
3.07	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	354.39	335.97	490.75	480.83
	rise	315.65	310.44	457.61	461.37
C to QN	fall	315.65	310.44	457.61	461.37
	rise	354.39	335.97	490.75	480.83

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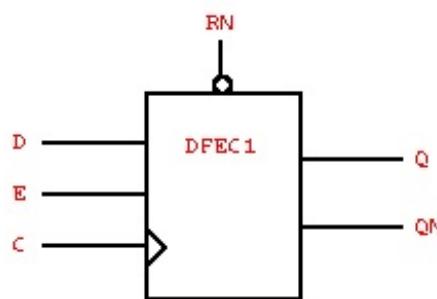
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	345.800 um ²
Equation	$Q = "(!(!RN)*(((D * E) + !((!PreviousFlipFlopState) + (D * E)) + (!D * E))))"$ $QN = "((!RN)+!(((D * E) + !((!PreviousFlipFlopState) + (D * E)) + (!D * E))))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, E
Output	Q, QN



State Table							
C	D	E	RN	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	-	L	H
R	H	H	H	-	-	H	L
F	-	H	H	L	H	L	H
F	-	H	H	H	L	H	L
-	-	L	H	L	H	L	H
-	-	L	H	H	L	H	L
-	-	-	L	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.60	1.16	0.78	1.34
	rise	0.48	1.31	0.70	1.53
C to QN	fall	0.58	1.12	0.80	1.33
	rise	0.72	1.53	0.90	1.72
RN to Q	fall	0.31	0.91	1.43	2.07
RN to QN	rise	0.50	1.33	1.67	2.49

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.09	1.32	0.10	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.11	0.77	0.18	0.77
RN to QN	rise	0.11	1.32	0.11	1.32

Constraints Time [ns]		
Setup C to D	fall	1.04
	rise	0.29
Hold C to D	fall	0.60
	rise	0.79
Setup C to E	fall	1.45
	rise	0.25
Hold C to E	fall	1.01
	rise	1.27
Recovery C to RN	rise	1.26
Removal C to RN	rise	1.27

Capacitance [fF]	
C	3.6950
D	8.9820
E	6.8950
RN	11.5470

Leakage [pW]	
2.78	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	273.55	273.68	409.33	418.05
	rise	223.27	232.56	362.16	384.14
C to QN	fall	223.27	232.56	362.16	384.14
	rise	273.55	273.68	409.33	418.05
RN to Q	fall	306.91	315.66	876.91	875.47
RN to QN	rise	306.91	315.66	876.91	875.47

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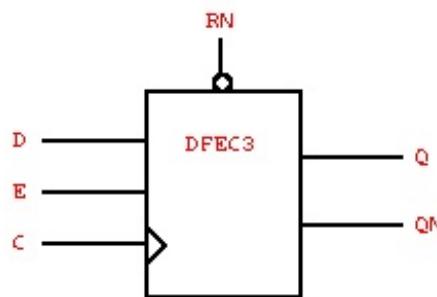
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	364.000 um ²
Equation	$Q = "(!(!RN)*(((D * E) + !((!PreviousFlipFlopState) + (D * E)) + (!D * E))))"$ $QN = "((!RN)+!(((D * E) + !((!PreviousFlipFlopState) + (D * E)) + (!D * E))))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, E
Output	Q, QN



State Table							
C	D	E	RN	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	-	L	H
R	H	H	H	-	-	H	L
F	-	H	H	L	H	L	H
F	-	H	H	H	L	H	L
-	-	L	H	L	H	L	H
-	-	L	H	H	L	H	L
-	-	-	L	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.64	1.20	0.82	1.38
	rise	0.50	1.31	0.72	1.53
C to QN	fall	0.65	1.18	0.87	1.40
	rise	0.81	1.60	0.99	1.78
RN to Q	fall	0.34	0.95	1.50	2.15
RN to QN	rise	0.60	1.40	1.81	2.59

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.11	0.73	0.19	0.75
RN to QN	rise	0.10	1.28	0.11	1.28

Constraints Time [ns]		
Setup C to D	fall	1.04
	rise	0.29
Hold C to D	fall	0.61
	rise	0.79
Setup C to E	fall	1.45
	rise	0.25
Hold C to E	fall	1.01
	rise	1.27
Recovery C to RN	rise	1.58
Removal C to RN	rise	1.27

Capacitance [fF]	
C	3.7010
D	8.8980
E	6.8950
RN	11.5600

Leakage [pW]	
3.09	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	387.66	365.46	525.56
	rise	317.03	316.35	458.11
C to QN	fall	317.03	316.35	458.11
	rise	387.66	365.46	525.56
RN to Q	fall	433.53	411.10	1060.76
RN to QN	rise	433.53	411.10	1060.76
				982.47
				982.47

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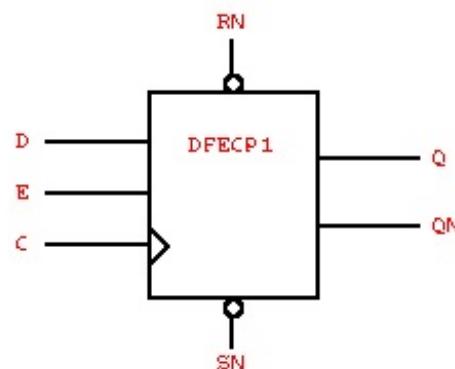
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	382.200 um ²
Equation	$Q = "(!(!RN)*((((D * E) + !((!PreviousFlipFlopState) + (!D * E)) + (D * E))))+(!SN))"$ $QN = "(!(!SN)*(!(((D * E) + !((!PreviousFlipFlopState) + (!D * E)) + (D * E))))+(!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, E
Output	Q, QN



State Table									
C	D	E	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	H	-	-	L	H	
R	H	H	H	H	-	-	H	L	
F	-	H	H	H	L	H	L	H	
F	-	H	H	H	H	L	H	L	
-	-	L	H	H	L	H	L	H	
-	-	L	H	H	H	L	H	L	
-	-	-	L	L	-	-	L	L	
-	-	-	L	H	-	-	L	H	
-	-	-	H	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.62	1.18	0.80	1.37
	rise	0.50	1.33	0.72	1.55
C to QN	fall	0.63	1.17	0.86	1.40
	rise	0.70	1.52	0.88	1.70
RN to Q	fall	0.32	0.96	1.47	2.16
	rise	0.21	1.08	0.24	1.13
RN to QN	rise	0.45	1.28	1.58	2.40
SN to Q	rise	0.45	1.32	1.50	2.36
SN to QN	fall	0.23	0.81	1.28	1.93
	rise	0.17	1.00	0.03	0.90

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.11	0.80	0.19	0.83
	rise	0.12	1.32	0.19	1.36
RN to QN	rise	0.11	1.32	0.11	1.32
SN to Q	rise	0.12	1.32	0.13	1.32
SN to QN	fall	0.09	0.76	0.16	0.80
	rise	0.11	1.32	0.16	1.37

Constraints		Time [ns]
Setup C to D	fall	0.97
	rise	0.36
Hold C to D	fall	0.54
	rise	0.75
Setup C to E	fall	1.37
	rise	0.32
Hold C to E	fall	0.93
	rise	1.17
Recovery C to RN	rise	1.30
Removal C to RN	rise	1.23
Recovery C to SN	rise	0.79
Removal C to SN	rise	0.54

Capacitance [fF]	
C	3.7010
D	8.9750
E	6.8700
RN	13.2120
SN	11.8960

Leakage [pW]	
	2.97

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	281.15	284.60	416.39	429.02
	rise	252.70	261.78	393.04	412.98
C to QN	fall	252.70	261.78	393.04	412.98
	rise	281.15	284.60	416.39	429.02
RN to Q	fall	336.78	375.31	1162.80	1241.43
	rise	182.86	200.22	1016.25	1282.14
RN to QN	rise	319.57	334.58	884.10	893.97
SN to Q	rise	313.78	321.71	890.21	891.67
SN to QN	fall	312.32	344.97	1085.32	1179.50
	rise	161.57	175.77	864.94	1188.54

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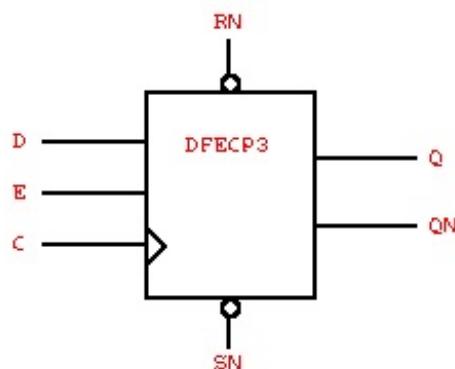
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	400.400 um ²
Equation	$Q = "(!(!RN)*((((D * E) + !((!PreviousFlipFlopState) + (!D * E)) + (D * E))))+(!SN))"$ $QN = "(!(!SN)*(!(((D * E) + !((!PreviousFlipFlopState) + (!D * E)) + (D * E))))+(!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, E
Output	Q, QN



State Table									
C	D	E	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	H	-	-	L	H	
R	H	H	H	H	-	-	H	L	
F	-	H	H	H	L	H	L	H	
F	-	H	H	H	H	L	H	L	
-	-	L	H	H	L	H	L	H	
-	-	L	H	H	H	L	H	L	
-	-	-	L	L	-	-	L	L	
-	-	-	L	H	-	-	L	H	
-	-	-	H	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.66	1.22	0.84	1.41
	rise	0.52	1.33	0.74	1.55
C to QN	fall	0.71	1.24	0.93	1.46
	rise	0.76	1.56	0.95	1.75
RN to Q	fall	0.36	1.00	1.53	2.23
	rise	0.22	1.08	0.30	1.17
RN to QN	rise	0.52	1.33	1.69	2.48
SN to Q	rise	0.52	1.37	1.63	2.45
SN to QN	fall	0.27	0.84	1.36	2.00
	rise	0.18	1.00	0.10	0.95

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.11	0.77	0.19	0.81
	rise	0.11	1.28	0.18	1.31
RN to QN	rise	0.10	1.28	0.11	1.28
SN to Q	rise	0.11	1.28	0.12	1.28
SN to QN	fall	0.09	0.73	0.17	0.77
	rise	0.10	1.28	0.16	1.32

Constraints		Time [ns]
Setup C to D	fall	0.97
	rise	0.36
Hold C to D	fall	0.54
	rise	0.75
Setup C to E	fall	1.37
	rise	0.32
Hold C to E	fall	0.94
	rise	1.17
Recovery C to RN	rise	1.61
Removal C to RN	rise	1.23
Recovery C to SN	rise	0.87
Removal C to SN	rise	0.54

Capacitance [fF]	
C	3.7010
D	8.8910
E	6.8690
RN	13.1890
SN	11.8700

Leakage [pW]	
	3.25

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	391.50	377.48	528.44	522.24
	rise	349.61	347.77	491.79	497.87
C to QN	fall	349.61	347.77	491.79	497.87
	rise	391.50	377.48	528.44	522.24
RN to Q	fall	453.03	470.95	1366.46	1353.38
	rise	270.57	280.60	1273.60	1405.61
RN to QN	rise	441.40	430.34	1054.81	998.53
SN to Q	rise	421.72	409.02	1064.91	993.69
SN to QN	fall	414.95	431.54	1289.45	1282.65
	rise	248.11	258.57	1115.75	1303.16

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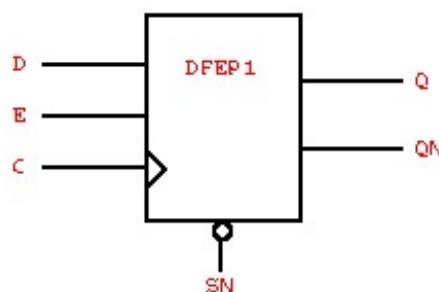
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	345.800 um ²
Equation	$Q = "((!SN)+(((D * E) + !((!(PreviousFlipFlopState) + (!D * E)) + (D * E))))"$ $QN = "((!(!SN)+(((D * E) + !((!(PreviousFlipFlopState) + (!D * E)) + (D * E))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, E
Output	Q, QN



State Table							
C	D	E	SN	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	-	L	H
R	H	H	H	-	-	H	L
F	-	H	H	L	H	L	H
F	-	H	H	H	L	H	L
-	-	L	H	L	H	L	H
-	-	L	H	H	L	H	L
-	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.55	1.11	0.74	1.29
	rise	0.51	1.34	0.73	1.56
C to QN	fall	0.64	1.18	0.87	1.40
	rise	0.63	1.45	0.82	1.64
SN to Q	rise	0.51	1.37	1.60	2.45
SN to QN	fall	0.22	0.78	1.25	1.87

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
SN to Q	rise	0.13	1.32	0.13	1.32
SN to QN	fall	0.08	0.75	0.16	0.76

Constraints Time [ns]		
Setup C to D	fall	0.95
	rise	0.34
Hold C to D	fall	0.55
	rise	0.74
Setup C to E	fall	1.35
	rise	0.30
Hold C to E	fall	0.94
	rise	1.16
Recovery C to SN	rise	0.87
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6680
D	8.9850
E	6.7300
SN	11.0100

Leakage [pW]	
2.70	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	245.46	247.95	378.95	392.19
	rise	242.33	248.42	382.67	399.46
C to QN	fall	242.33	248.42	382.67	399.46
	rise	245.46	247.95	378.95	392.19
SN to Q	rise	297.14	301.06	874.22	868.16
SN to QN	fall	297.14	301.06	874.22	868.16

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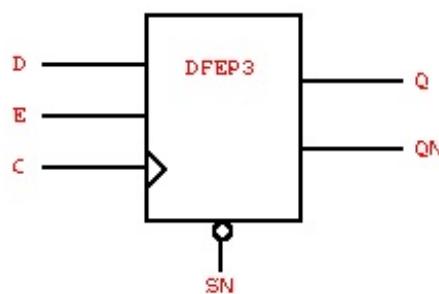
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	364.000 um ²
Equation	$Q = "((!SN)+(((D * E) + !((!(PreviousFlipFlopState) + (!D * E)) + (D * E))))"$ $QN = "((!(!SN)+(((D * E) + !((!(PreviousFlipFlopState) + (!D * E)) + (D * E))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, E
Output	Q, QN



State Table							
C	D	E	SN	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	-	L	H
R	H	H	H	-	-	H	L
F	-	H	H	L	H	L	H
F	-	H	H	H	L	H	L
-	-	L	H	L	H	L	H
-	-	L	H	H	L	H	L
-	-	-	L	-	-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	0.59	1.15	0.78
	rise	0.54	1.35	0.76
C to QN	fall	0.73	1.26	0.95
	rise	0.70	1.50	0.88
SN to Q	rise	0.60	1.44	1.75
SN to QN	fall	0.26	0.82	1.34
				1.95

Output Transition [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	0.08	0.72	0.08
	rise	0.09	1.28	0.09
C to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.09
SN to Q	rise	0.12	1.28	0.12
SN to QN	fall	0.09	0.72	0.17
				0.74

Constraints Time [ns]		
Setup C to D	fall	0.95
	rise	0.33
Hold C to D	fall	0.55
	rise	0.74
Setup C to E	fall	1.34
	rise	0.29
Hold C to E	fall	0.94
	rise	1.15
Recovery C to SN	rise	0.96
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6750
D	8.8850
E	6.7280
SN	11.0510

Leakage [pW]	
	3.00

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	350.52	339.09	485.73
	rise	341.53	334.90	484.15
C to QN	fall	341.53	334.90	484.15
	rise	350.52	339.09	485.73
SN to Q	rise	408.27	389.23	1056.26
SN to QN	fall	408.27	389.23	1056.26
				971.46

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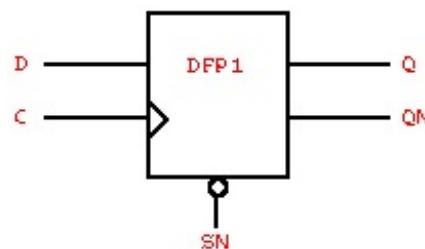
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	309.400 μm^2
Equation	$Q = "((!SN)+(D))"$ $QN = "(!((!SN)+(D)))"$
Clock	C
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table							
C	D	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	-	L	H	
R	H	H	-	-	H	L	
F	-	H	L	H	L	H	
F	-	H	H	L	H	L	
-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.56	1.11	0.77	1.32
	rise	0.49	1.31	0.72	1.54
C to QN	fall	0.61	1.14	0.84	1.37
	rise	0.63	1.45	0.84	1.66
SN to Q	rise	0.38	1.20	1.43	2.24
SN to QN	fall	0.21	0.76	1.23	1.81

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
SN to Q	rise	0.09	1.32	0.10	1.32
SN to QN	fall	0.08	0.75	0.15	0.75

Constraints Time [ns]		
Setup C to D	fall	0.92
	rise	0.32
Hold C to D	fall	0.56
	rise	0.89
Recovery C to SN	rise	0.82
Removal C to SN	rise	0.70

Capacitance [fF]	
C	3.8340
D	4.5230
SN	11.0930

Leakage [pW]	
2.29	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	229.56	231.76	362.17	374.69
	rise	226.37	233.47	364.53	383.53
C to QN	fall	226.37	233.47	364.53	383.53
	rise	229.56	231.76	362.17	374.69
SN to Q	rise	255.37	256.84	787.62	783.53
SN to QN	fall	255.37	256.84	787.62	783.53

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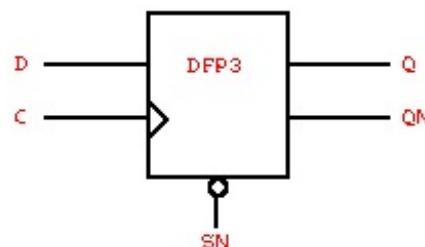
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	309.400 μm^2
Equation	$Q = "((!SN)+(D))"$ $QN = "(!((!SN)+(D)))"$
Clock	C
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table							
C	D	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	-	L	H	
R	H	H	-	-	H	L	
F	-	H	L	H	L	H	
F	-	H	H	L	H	L	
-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.60	1.15	0.81	1.36
	rise	0.53	1.33	0.75	1.56
C to QN	fall	0.70	1.23	0.93	1.46
	rise	0.71	1.51	0.92	1.72
SN to Q	rise	0.49	1.28	1.60	2.38
SN to QN	fall	0.25	0.81	1.33	1.92

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.29	0.09	1.29
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.29	0.09	1.29
SN to Q	rise	0.09	1.29	0.10	1.29
SN to QN	fall	0.09	0.72	0.17	0.72

Constraints Time [ns]		
Setup C to D	fall	0.91
	rise	0.32
Hold C to D	fall	0.56
	rise	0.89
Recovery C to SN	rise	0.95
Removal C to SN	rise	0.70

Capacitance [fF]	
C	3.8260
D	4.5230
SN	11.0910

Leakage [pW]	
2.61	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	338.22	327.89	472.11	471.99
	rise	335.63	331.59	476.89	481.35
C to QN	fall	335.63	331.59	476.89	481.35
	rise	338.22	327.89	472.11	471.99
SN to Q	rise	374.70	355.53	978.60	897.63
SN to QN	fall	374.70	355.53	978.60	897.63

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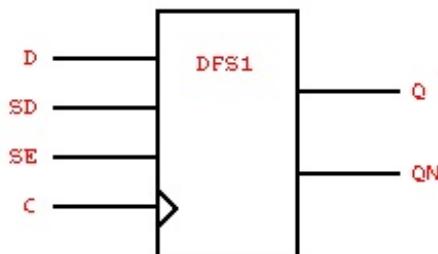
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	364.000 um ²
Equation	$Q = (((SD * SE) + (D * !SE)))$ $QN = ((!(SD * SE) + (D * !SE)))$
Clock	C
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table							
C	D	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	-	L	-	-	-	L H
R	H	-	L	-	-	-	H L
R	-	L	H	-	-	-	L H
R	-	H	H	-	-	-	H L
F	-	-	-	L	H	L	H
F	-	-	-	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.53	1.07	0.70	1.25
	rise	0.48	1.31	0.70	1.52
C to QN	fall	0.58	1.12	0.80	1.33
	rise	0.64	1.46	0.81	1.63

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32

Constraints Time [ns]		
Setup C to D	fall	1.31
	rise	0.58
Hold C to D	fall	0.19
	rise	0.87
Setup C to SD	fall	1.03
	rise	0.28
Hold C to SD	fall	0.60
	rise	0.78
Setup C to SE	fall	1.57
	rise	0.23
Hold C to SE	fall	1.02
	rise	1.26

Capacitance [fF]	
C	3.6930
D	3.9010
SD	9.0020
SE	6.8080

Leakage [pW]	
3.11	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	234.24	233.75	368.26	378.93
	rise	208.68	215.30	347.77	366.82
C to QN	fall	208.68	215.30	347.77	366.82
	rise	234.24	233.75	368.26	378.93

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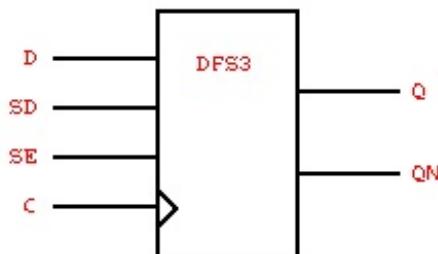
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3
Strength	3
Cell Area	382.200 um ²
Equation	$Q = (((SD * SE) + (D * !SE)))$ $QN = ((!(SD * SE) + (D * !SE)))$
Clock	C
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table							
C	D	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	-	L	-	-	L	H
R	H	-	L	-	-	H	L
R	-	L	H	-	-	L	H
R	-	H	H	-	-	H	L
F	-	-	-	L	H	L	H
F	-	-	-	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.57	1.11	0.74	1.29
	rise	0.52	1.32	0.73	1.54
C to QN	fall	0.67	1.20	0.88	1.41
	rise	0.73	1.52	0.90	1.69

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to D	fall	1.31
	rise	0.57
Hold C to D	fall	0.19
	rise	0.87
Setup C to SD	fall	1.03
	rise	0.27
Hold C to SD	fall	0.60
	rise	0.78
Setup C to SE	fall	1.57
	rise	0.23
Hold C to SE	fall	1.02
	rise	1.26

Capacitance [fF]	
C	3.7010
D	3.9040
SD	8.9130
SE	6.8160

Leakage [pW]	
3.42	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	341.47	324.12	477.53
	rise	303.49	299.17	445.20
C to QN	fall	303.49	299.17	451.28
	rise	341.47	324.12	477.53
				469.85

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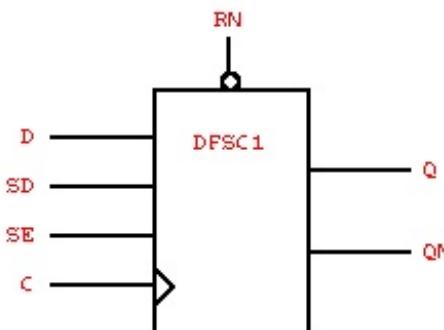
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	382.200 um ²
Equation	$Q = "(!(!RN)*(((D * !SE) + (SD * SE))))"$ $QN = "((!RN)+!(((D * !SE) + (SD * SE))))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table								
C	D	RN	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	L	-	-	L	H
R	H	H	-	L	-	-	H	L
R	-	H	L	H	-	-	L	H
R	-	H	H	H	-	-	H	L
F	-	H	-	-	L	H	L	H
F	-	H	-	-	H	L	H	L
-	-	L	-	-	-	-	-	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.59	1.14	0.77	1.32
	rise	0.47	1.30	0.69	1.52
C to QN	fall	0.57	1.10	0.79	1.32
	rise	0.70	1.52	0.88	1.70
RN to Q	fall	0.19	0.74	1.18	1.77
RN to QN	rise	0.36	1.19	1.40	2.21

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.07	0.74	0.14	0.75
RN to QN	rise	0.11	1.32	0.11	1.32

Constraints Time [ns]		
Setup C to D	fall	1.36
	rise	0.62
Hold C to D	fall	0.16
	rise	0.88
Recovery C to RN	rise	1.15
Removal C to RN	rise	1.27
Setup C to SD	fall	1.06
	rise	0.31
Hold C to SD	fall	0.59
	rise	0.80
Setup C to SE	fall	1.62
	rise	0.26
Hold C to SE	fall	1.00
	rise	1.28

Capacitance [fF]	
C	3.6960
D	3.9020
RN	11.6800
SD	8.9980
SE	6.7940

Leakage [pW]	
3.15	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	267.71	267.14	403.14	411.83
	rise	216.32	226.38	355.10	378.20
C to QN	fall	216.32	226.38	355.10	378.20
	rise	267.71	267.14	403.14	411.83
RN to Q	fall	253.77	261.50	777.59	779.24
RN to QN	rise	253.77	261.50	777.59	779.24

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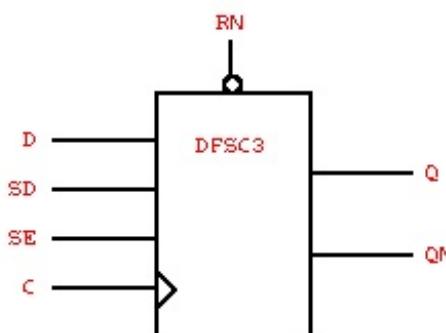
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	400.400 um ²
Equation	$Q = "(!RN)*(((D * !SE) + (SD * SE))))"$ $QN = "((!RN)+!(((D * !SE) + (SD * SE))))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table								
C	D	RN	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	L	-	-	L	H
R	H	H	-	L	-	-	H	L
R	-	H	L	H	-	-	L	H
R	-	H	H	H	-	-	H	L
F	-	H	-	-	L	H	L	H
F	-	H	-	-	H	L	H	L
-	-	L	-	-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.63	1.18	0.81	1.36
	rise	0.49	1.30	0.71	1.52
C to QN	fall	0.64	1.17	0.86	1.39
	rise	0.79	1.58	0.97	1.76
RN to Q	fall	0.23	0.77	1.28	1.87
RN to QN	rise	0.45	1.25	1.56	2.34

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.08	0.71	0.15	0.72
RN to QN	rise	0.10	1.28	0.10	1.28

Constraints Time [ns]		
Setup C to D	fall	1.35
	rise	0.62
Hold C to D	fall	0.16
	rise	0.88
Recovery C to RN	rise	1.47
Removal C to RN	rise	1.27
Setup C to SD	fall	1.06
	rise	0.30
Hold C to SD	fall	0.59
	rise	0.80
Setup C to SE	fall	1.61
	rise	0.26
Hold C to SE	fall	1.00
	rise	1.29

Capacitance [fF]	
C	3.7010
D	3.8960
RN	11.7000
SD	8.9030
SE	6.7880

Leakage [pW]	
3.47	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	380.14	359.69	517.27	504.27
	rise	309.08	310.22	450.27	461.83
C to QN	fall	309.08	310.22	450.27	461.83
	rise	380.14	359.69	517.27	504.27
RN to Q	fall	371.28	354.61	964.61	885.03
RN to QN	rise	371.28	354.61	964.61	885.03

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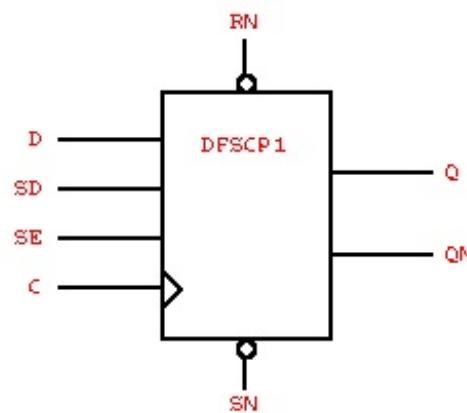
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	400.400 um ²
Equation	$Q = "(!(!RN)*((((D * !SE) + (SD * SE)))+(!SN)))"$ $QN = "(!(!SN)*(!(((D * !SE) + (SD * SE)))+(!RN)))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table										
C	D	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	H	-	-	L	H	
R	H	H	-	L	H	-	-	H	L	
R	-	H	L	H	H	-	-	L	H	
R	-	H	H	H	H	-	-	H	L	
F	-	H	-	-	H	L	H	L	H	
F	-	H	-	-	H	H	L	H	L	
-	-	L	-	-	L	-	-	L	L	
-	-	L	-	-	H	-	-	L	H	
-	-	H	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.60	1.16	0.79	1.35
	rise	0.49	1.31	0.71	1.54
C to QN	fall	0.62	1.16	0.85	1.39
	rise	0.68	1.50	0.87	1.69
RN to Q	fall	0.20	0.75	1.21	1.84
	rise	0.15	0.98	-0.07	0.80
RN to QN	rise	0.32	1.16	1.32	2.15
SN to Q	rise	0.38	1.20	1.40	2.22
SN to QN	fall	0.23	0.81	1.28	1.94
	rise	0.17	1.00	0.03	0.90

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.07	0.74	0.15	0.79
	rise	0.09	1.32	0.15	1.36
RN to QN	rise	0.11	1.32	0.11	1.32
SN to Q	rise	0.10	1.32	0.10	1.32
SN to QN	fall	0.09	0.76	0.16	0.80
	rise	0.11	1.32	0.16	1.37

Constraints		Time [ns]
Setup C to D	fall	1.26
	rise	0.74
Hold C to D	fall	0.13
	rise	0.84
Recovery C to RN	rise	1.19
Removal C to RN	rise	1.23
Setup C to SD	fall	0.99
	rise	0.37
Hold C to SD	fall	0.52
	rise	0.75
Setup C to SE	fall	1.51
	rise	0.33
Hold C to SE	fall	0.93
	rise	1.16
Recovery C to SN	rise	0.83
Removal C to SN	rise	0.53

Capacitance [fF]	
C	3.6990
D	3.8120
RN	13.2860
SD	8.9910
SE	6.8140
SN	11.8440

Leakage [pW]	
	3.33

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	274.08	275.81	408.94	420.23
	rise	245.38	255.07	385.71	406.89
C to QN	fall	245.38	255.07	385.71	406.89
	rise	274.08	275.81	408.94	420.23
RN to Q	fall	284.94	306.75	1072.37	1159.06
	rise	129.35	134.25	909.15	1239.03
RN to QN	rise	264.32	273.53	783.42	791.05
SN to Q	rise	277.63	281.34	809.49	810.20
SN to QN	fall	289.38	320.13	1006.47	1096.52
	rise	153.13	166.25	808.13	1110.37

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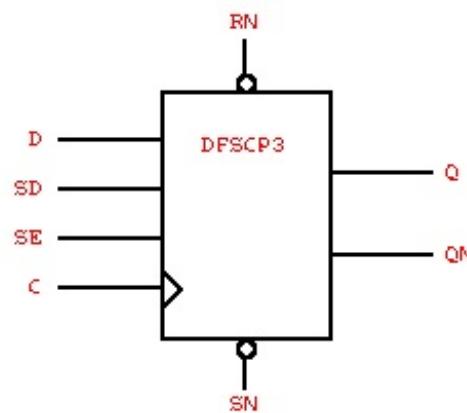
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	418.600 um ²
Equation	$Q = "(!(!RN)*(((D * !SE) + (SD * SE)))+(!SN))"$ $QN = "(!(!SN)*(!((D * !SE) + (SD * SE)))+(!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table										
C	D	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	H	-	-	L	H	
R	H	H	-	L	H	-	-	H	L	
R	-	H	L	H	H	-	-	L	H	
R	-	H	H	H	H	-	-	H	L	
F	-	H	-	-	H	L	H	L	H	
F	-	H	-	-	H	H	L	H	L	
-	-	L	-	-	L	-	-	L	L	
-	-	L	-	-	H	-	-	L	H	
-	-	H	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.64	1.20	0.83	1.38
	rise	0.51	1.32	0.73	1.54
C to QN	fall	0.70	1.23	0.92	1.45
	rise	0.75	1.55	0.94	1.73
RN to Q	fall	0.24	0.79	1.30	1.93
	rise	0.17	0.97	0.02	0.86
RN to QN	rise	0.39	1.20	1.46	2.25
SN to Q	rise	0.45	1.25	1.53	2.31
SN to QN	fall	0.27	0.84	1.36	2.01
	rise	0.18	1.00	0.10	0.95

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.08	0.71	0.16	0.76
	rise	0.08	1.28	0.15	1.31
RN to QN	rise	0.10	1.28	0.10	1.28
SN to Q	rise	0.09	1.28	0.10	1.28
SN to QN	fall	0.09	0.73	0.17	0.77
	rise	0.10	1.28	0.16	1.32

Constraints		Time [ns]
Setup C to D	fall	1.26
	rise	0.73
Hold C to D	fall	0.13
	rise	0.84
Recovery C to RN	rise	1.50
Removal C to RN	rise	1.23
Setup C to SD	fall	0.99
	rise	0.37
Hold C to SD	fall	0.52
	rise	0.75
Setup C to SE	fall	1.50
	rise	0.33
Hold C to SE	fall	0.93
	rise	1.17
Recovery C to SN	rise	0.91
Removal C to SN	rise	0.53

Capacitance [fF]	
C	3.7000
D	3.8180
RN	13.2750
SD	8.9020
SE	6.8080
SN	11.8320

Leakage [pW]	
	3.61

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	382.72	369.00	518.71	513.26
	rise	341.38	340.71	483.88	491.38
C to QN	fall	341.38	340.71	483.88	491.38
	rise	382.72	369.00	518.71	513.26
RN to Q	fall	388.60	399.36	1275.39	1265.06
	rise	211.77	215.54	1155.36	1347.42
RN to QN	rise	377.35	367.00	958.47	893.96
SN to Q	rise	382.06	367.91	979.03	909.82
SN to QN	fall	390.11	406.35	1206.89	1198.58
	rise	239.71	248.57	1056.89	1224.93

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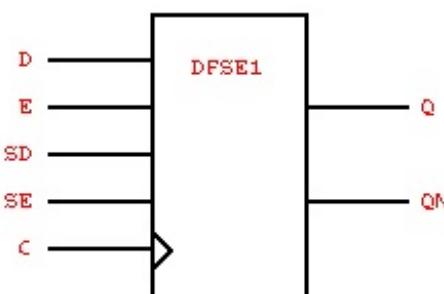
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	418.600 um ²
Equation	$Q = (((SE * SD) + (!SE * E) * D)) +$ $!((!(PreviousFlipFlopState) + SE) + (!SE * E)))$ $QN = (((SE * SD) + (!SE * E) * D)) +$ $!((!(PreviousFlipFlopState) + SE) + (!SE * E))))$
Clock	C
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table								
C	D	E	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	L	-	-	L	H
R	H	H	-	L	-	-	H	L
R	-	-	L	H	-	-	L	H
R	-	-	H	H	-	-	H	L
F	-	H	-	L	L	H	L	H
F	-	H	-	L	H	L	H	L
F	-	-	-	H	L	H	L	H
F	-	-	-	H	H	L	H	L
-	-	L	-	L	L	H	L	H
-	-	L	-	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.62	1.23	0.80	1.40
	rise	0.58	1.42	0.79	1.63
C to QN	fall	0.69	1.23	0.90	1.44
	rise	0.75	1.57	0.93	1.74

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.09	0.77	0.09	0.77
	rise	0.11	1.32	0.11	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.10	1.32	0.10	1.32

Constraints Time [ns]		
Setup C to D	fall	1.19
	rise	0.41
Hold C to D	fall	0.43
	rise	0.75
Setup C to E	fall	1.59
	rise	0.38
Hold C to E	fall	0.80
	rise	1.23
Setup C to SD	fall	1.02
	rise	0.27
Hold C to SD	fall	0.61
	rise	0.78
Setup C to SE	fall	1.53
	rise	0.22
Hold C to SE	fall	1.00
	rise	1.24

Capacitance [fF]	
C	3.6990
D	8.9930
E	6.8290
SD	9.0270
SE	6.8630

Leakage [pW]	
3.42	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		5.00	160.00	5.00
C to Q	fall	289.51	297.17	426.41
	rise	263.58	268.84	405.04
C to QN	fall	263.58	268.84	405.04
	rise	289.51	297.17	426.41

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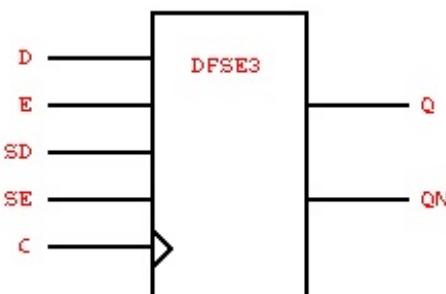
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3
Strength	3
Cell Area	436.800 um ²
Equation	$Q = (((SE * SD) + (!SE * E) * D)) +$ $!((!(PreviousFlipFlopState) + SE) + (!SE * E)))$ $QN = (((SE * SD) + (!SE * E) * D)) +$ $!((!(PreviousFlipFlopState) + SE) + (!SE * E))))$
Clock	C
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table								
C	D	E	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	L	-	-	L	H
R	H	H	-	L	-	-	H	L
R	-	-	L	H	-	-	L	H
R	-	-	H	H	-	-	H	L
F	-	H	-	L	L	H	L	H
F	-	H	-	L	H	L	H	L
F	-	-	-	H	L	H	L	H
F	-	-	-	H	H	L	H	L
-	-	L	-	L	L	H	L	H
-	-	L	-	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.66	1.26	0.83	1.44
	rise	0.60	1.43	0.82	1.64
C to QN	fall	0.77	1.30	0.99	1.52
	rise	0.85	1.63	1.02	1.81

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.10	0.74	0.10	0.74
	rise	0.11	1.28	0.11	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to D	fall	1.19
	rise	0.41
Hold C to D	fall	0.43
	rise	0.75
Setup C to E	fall	1.58
	rise	0.37
Hold C to E	fall	0.80
	rise	1.23
Setup C to SD	fall	1.02
	rise	0.26
Hold C to SD	fall	0.61
	rise	0.78
Setup C to SE	fall	1.53
	rise	0.22
Hold C to SE	fall	1.01
	rise	1.24

Capacitance [fF]	
C	3.7030
D	8.9020
E	6.8200
SD	9.0260
SE	6.8650

Leakage [pW]	
3.73	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	414.66	393.28	553.07
	rise	371.28	354.91	514.91
C to QN	fall	371.28	354.91	514.91
	rise	414.66	393.28	553.07

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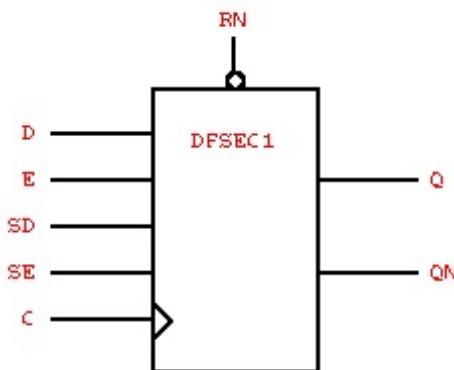
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C** .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	436.800 μm^2
Equation	$Q = "(!(!RN)*((((!SE * E) * D) + (SE * SD)) + !((!(PreviousFlipFlopState) + (!SE * E)) + SE)))"$ $QN = "((!RN)+((((!SE * E) * D) + (SE * SD)) + !((!(PreviousFlipFlopState) + (!SE * E)) + SE)))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table									
C	D	E	RN	SD	SE	$IQ_{(int)}$	$IQN_{(int)}$	Q	QN
R	L	H	H	-	L	-	-	L	H
R	H	H	H	-	L	-	-	H	L
R	-	-	H	L	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	-	H	H	-	L	L	H	L	H
F	-	H	H	-	L	H	L	H	L
F	-	-	H	-	H	L	H	L	H
F	-	-	H	-	H	H	L	H	L
-	-	L	H	-	L	L	H	L	H
-	-	L	H	-	L	H	L	H	L
-	-	-	L	-	-	-	-	-	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.68	1.28	0.86
	rise	0.54	1.38	0.75
C to QN	fall	0.64	1.18	0.86
	rise	0.81	1.63	0.99
RN to Q	fall	0.34	0.97	1.52
RN to QN	rise	0.56	1.39	1.78
				2.60

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
C to Q	fall	0.10	0.77	0.10
	rise	0.11	1.32	0.11
C to QN	fall	0.07	0.75	0.07
	rise	0.10	1.32	0.10
RN to Q	fall	0.12	0.78	0.20
RN to QN	rise	0.11	1.32	0.12
				1.32

Constraints Time [ns]		
Setup C to D	fall	1.23
	rise	0.44
Hold C to D	fall	0.42
	rise	0.75
Setup C to E	fall	1.63
	rise	0.40
Hold C to E	fall	0.79
	rise	1.25
Recovery C to RN	rise	1.82
Removal C to RN	rise	1.27
Setup C to SD	fall	1.04
	rise	0.29
Hold C to SD	fall	0.60
	rise	0.79
Setup C to SE	fall	1.56
	rise	0.25
Hold C to SE	fall	1.00
	rise	1.26

Capacitance [fF]	
C	3.6980
D	8.9780
E	6.7040
RN	11.6590
SD	9.0120
SE	6.9190

Leakage [pW]	
	3.48

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	165.28	173.45	136.83	152.20
	rise	114.13	122.77	88.28	108.13
C to QN	fall	114.13	122.77	88.28	108.13
	rise	165.28	173.45	136.83	152.20
RN to Q	fall	331.35	352.59	897.88	907.99
RN to QN	rise	331.35	352.59	897.88	907.99

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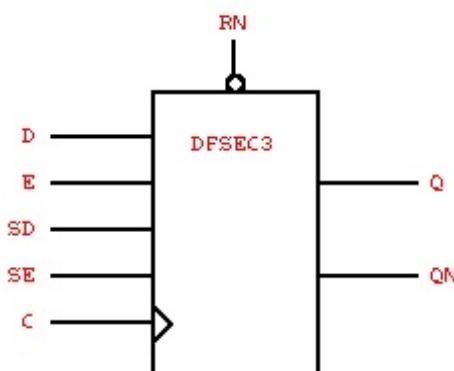
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C** .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	455.000 μm^2
Equation	$Q = "(!(!RN)*((((!SE * E) * D) + (SE * SD)) + !((!(PreviousFlipFlopState) + (!SE * E)) + SE)))"$ $QN = "((!RN)+!((((!SE * E) * D) + (SE * SD)) + !((!(PreviousFlipFlopState) + (!SE * E)) + SE)))"$
Clock	C
Reset	RN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table									
C	D	E	RN	SD	SE	$IQ_{(int)}$	$IQN_{(int)}$	Q	QN
R	L	H	H	-	L	-	-	L	H
R	H	H	H	-	L	-	-	H	L
R	-	-	H	L	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	-	H	H	-	L	L	H	L	H
F	-	H	H	-	L	H	L	H	L
F	-	-	H	-	H	L	H	L	H
F	-	-	H	-	H	H	L	H	L
-	-	L	H	-	L	L	H	L	H
-	-	L	H	-	L	H	L	H	L
-	-	-	L	-	-	-	-	-	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.71	1.32	0.89
	rise	0.55	1.38	0.77
C to QN	fall	0.72	1.25	0.94
	rise	0.90	1.69	1.08
RN to Q	fall	0.39	1.02	1.59
RN to QN	rise	0.67	1.46	1.91
				2.25
				2.69

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.10	0.74	0.10
	rise	0.10	1.28	0.10
C to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.09
RN to Q	fall	0.12	0.75	0.20
RN to QN	rise	0.11	1.28	0.11
				0.76
				1.28

Constraints Time [ns]		
Setup C to D	fall	1.22
	rise	0.43
Hold C to D	fall	0.42
	rise	0.76
Setup C to E	fall	1.63
	rise	0.40
Hold C to E	fall	0.79
	rise	1.25
Recovery C to RN	rise	2.09
Removal C to RN	rise	1.27
Setup C to SD	fall	1.04
	rise	0.29
Hold C to SD	fall	0.61
	rise	0.80
Setup C to SE	fall	1.56
	rise	0.25
Hold C to SE	fall	1.00
	rise	1.26

Capacitance [fF]	
C	3.7030
D	8.8910
E	6.6980
RN	11.6520
SD	9.0130
SE	6.9170

Leakage [pW]	
	3.79

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	294.78	270.48	267.96	248.33
	rise	216.91	207.64	192.72	192.82
C to QN	fall	216.91	207.64	192.72	192.82
	rise	294.78	270.48	267.96	248.33
RN to Q	fall	463.81	449.03	1081.08	1014.77
RN to QN	rise	463.81	449.03	1081.08	1014.77

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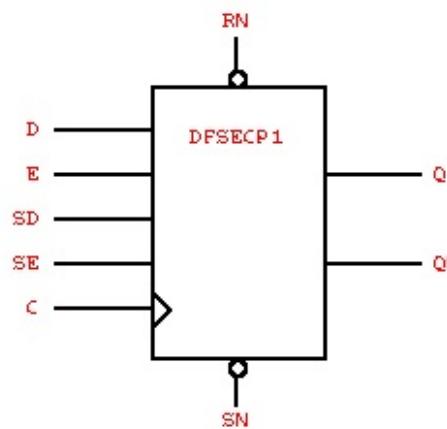
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	455.000 μm^2
Equation	$Q = "(!(!RN)*((((!SE * E) * D) + (SE * SD)) + (!(!PreviousFlipFlopState) + (!SE * E)) + (SE))) + (!SN))"$ $QN = "(!(!SN)*((((!SE * E) * D) + (SE * SD)) + (!(!PreviousFlipFlopState) + (!SE * E)) + (SE))) + (!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table											
C	D	E	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	L	H	-	-	L	H	
R	H	H	H	-	L	H	-	-	H	L	
R	-	-	H	L	H	H	-	-	L	H	
R	-	-	H	H	H	H	-	-	H	L	
F	-	H	H	-	L	H	L	H	L	H	
F	-	H	H	-	L	H	H	L	H	L	
F	-	-	H	-	H	H	L	H	L	H	
F	-	-	H	-	H	H	H	L	H	L	
-	-	L	H	-	L	H	L	H	L	H	
-	-	L	H	-	L	H	H	L	H	L	
-	-	-	L	-	-	L	-	-	L	L	
-	-	-	L	-	-	H	-	-	L	H	
-	-	-	H	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.69	1.30	0.88	1.49
	rise	0.55	1.39	0.77	1.61
C to QN	fall	0.70	1.24	0.93	1.47
	rise	0.77	1.59	0.95	1.78
RN to Q	fall	0.35	1.03	1.54	2.27
	rise	0.21	1.12	0.32	1.24
RN to QN	rise	0.49	1.31	1.67	2.49
SN to Q	rise	0.47	1.37	1.52	2.41
SN to QN	fall	0.23	0.81	1.29	1.94
	rise	0.17	1.01	0.04	0.91

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.10	0.77	0.10	0.77
	rise	0.11	1.32	0.11	1.32
C to QN	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
RN to Q	fall	0.12	0.82	0.20	0.85
	rise	0.12	1.34	0.21	1.37
RN to QN	rise	0.11	1.32	0.11	1.32
SN to Q	rise	0.12	1.34	0.13	1.34
SN to QN	fall	0.09	0.76	0.16	0.80
	rise	0.11	1.32	0.16	1.37

Constraints Time [ns]		
Setup C to D	fall	1.13
	rise	0.51
Hold C to D	fall	0.35
	rise	0.71
Setup C to E	fall	1.52
	rise	0.48
Hold C to E	fall	0.71
	rise	1.12
Recovery C to RN	rise	1.83
Removal C to RN	rise	1.23
Setup C to SD	fall	0.97
	rise	0.36
Hold C to SD	fall	0.54
	rise	0.75
Setup C to SE	fall	1.46
	rise	0.32
Hold C to SE	fall	0.92
	rise	1.15
Recovery C to SN	rise	0.68
Removal C to SN	rise	0.54

Capacitance [fF]	
C	3.7030
D	8.9600
E	6.7130
RN	13.2370
SD	9.0080
SE	6.9030
SN	11.8830

Leakage [pW]	
	3.65

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	155.63	171.71	125.81	149.31
	rise	132.15	140.08	107.17	124.40
C to QN	fall	132.15	140.08	107.17	124.40
	rise	155.63	171.71	125.81	149.31
RN to Q	fall	354.95	405.24	1180.76	1267.12
	rise	186.04	210.07	1031.69	1288.07
RN to QN	rise	338.41	369.80	899.30	924.47
SN to Q	rise	324.79	343.75	903.00	915.48
SN to QN	fall	319.14	357.60	1077.08	1173.68
	rise	157.56	170.81	840.39	1147.85

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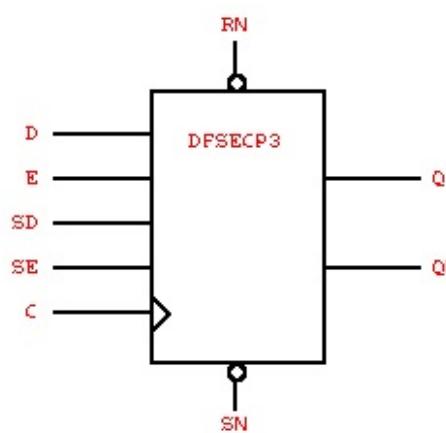
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	473.200 um ²
Equation	$Q = "((!(RN)*((((!SE * E) * D) + (SE * SD)) + (!((!PreviousFlipFlopState) + (SE * E)) + SE))) + (!SN))"$ $QN = "(!(!SN)*((((!SE * E) * D) + (SE * SD)) + (!((!PreviousFlipFlopState) + (SE * E)) + SE))) + (!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table											
C	D	E	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	L	H	-	-	L	H	
R	H	H	H	-	L	H	-	-	H	L	
R	-	-	H	L	H	H	-	-	L	H	
R	-	-	H	H	H	H	-	-	H	L	
F	-	H	H	-	L	H	L	H	L	H	
F	-	H	H	-	L	H	H	L	H	L	
F	-	-	H	-	H	H	L	H	L	H	
F	-	-	H	-	H	H	H	L	H	L	
-	-	L	H	-	L	H	L	H	L	H	
-	-	L	H	-	L	H	H	L	H	L	
-	-	-	L	-	-	L	-	-	L	L	
-	-	-	L	-	-	H	-	-	L	H	
-	-	-	H	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.73	1.34	0.91	1.52
	rise	0.57	1.39	0.79	1.62
C to QN	fall	0.78	1.31	1.00	1.53
	rise	0.84	1.64	1.02	1.82
RN to Q	fall	0.40	1.07	1.61	2.33
	rise	0.23	1.13	0.37	1.28
RN to QN	rise	0.57	1.37	1.77	2.57
SN to Q	rise	0.54	1.42	1.65	2.51
SN to QN	fall	0.27	0.85	1.37	2.01
	rise	0.19	1.00	0.11	0.96

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.11	0.74	0.11	0.74
	rise	0.10	1.28	0.10	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.13	0.79	0.20	0.83
	rise	0.11	1.30	0.20	1.33
RN to QN	rise	0.10	1.28	0.11	1.28
SN to Q	rise	0.12	1.30	0.12	1.30
SN to QN	fall	0.09	0.73	0.17	0.77
	rise	0.10	1.28	0.16	1.32

Constraints Time [ns]		
Setup C to D	fall	1.13
	rise	0.51
Hold C to D	fall	0.35
	rise	0.71
Setup C to E	fall	1.52
	rise	0.47
Hold C to E	fall	0.72
	rise	1.12
Recovery C to RN	rise	2.09
Removal C to RN	rise	1.23
Setup C to SD	fall	0.97
	rise	0.36
Hold C to SD	fall	0.54
	rise	0.75
Setup C to SE	fall	1.46
	rise	0.31
Hold C to SE	fall	0.92
	rise	1.15
Recovery C to SN	rise	0.76
Removal C to SN	rise	0.54

Capacitance [fF]	
C	3.7030
D	8.8670
E	6.7090
RN	13.2280
SD	9.0070
SE	6.9030
SN	11.8720

Leakage [pW]	
	3.93

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	280.15	268.93	251.14	246.47
	rise	238.22	226.45	214.88	209.97
C to QN	fall	238.22	226.45	214.88	209.97
	rise	280.15	268.93	251.14	246.47
RN to Q	fall	474.64	501.71	1384.91	1380.28
	rise	275.06	292.50	1292.42	1414.92
RN to QN	rise	464.20	466.38	1069.25	1029.38
SN to Q	rise	434.73	431.89	1080.10	1017.99
SN to QN	fall	422.77	444.70	1281.38	1277.48
	rise	244.28	255.14	1090.61	1262.52

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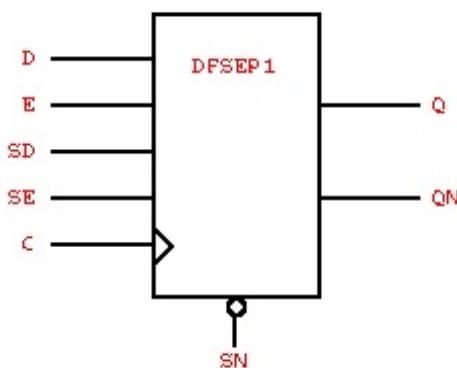
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	436.800 μm^2
Equation	$Q = "((!(\text{SN}) + (((!(\text{SE} * \text{E}) * \text{D}) + (\text{SE} * \text{SD})) + !((!(\text{PreviousFlipFlopState}) + (\text{!SE} * \text{E})) + \text{SE})))"$ $\text{QN} = "((!(\text{ISN}) + (((!(\text{SE} * \text{E}) * \text{D}) + (\text{SE} * \text{SD})) + !((!(\text{PreviousFlipFlopState}) + (\text{!SE} * \text{E})) + \text{SE}))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table										
C	D	E	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	H	-	-	L	H	
R	H	H	-	L	H	-	-	H	L	
R	-	-	L	H	H	-	-	L	H	
R	-	-	H	H	H	-	-	H	L	
F	-	H	-	L	H	L	H	L	H	
F	-	H	-	L	H	H	L	H	L	
F	-	-	-	H	H	L	H	L	H	
F	-	-	-	H	H	H	L	H	L	
-	-	L	-	L	H	L	H	L	H	
-	-	L	-	L	H	H	L	H	L	
-	-	-	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]	0.01		4.00		
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.63	1.24	0.81	1.42
	rise	0.58	1.42	0.81	1.64
C to QN	fall	0.74	1.28	0.96	1.50
	rise	0.71	1.53	0.89	1.72
SN to Q	rise	0.54	1.44	1.64	2.52
SN to QN	fall	0.23	0.79	1.27	1.88

Output Transition [ns]					
Input Transition [ns]	0.01		4.00		
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.10	0.77	0.10	0.77
	rise	0.11	1.32	0.11	1.32
C to QN	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
SN to Q	rise	0.13	1.34	0.14	1.34
SN to QN	fall	0.08	0.75	0.16	0.77

Constraints Time [ns]		
Setup C to D	fall	1.10
	rise	0.49
Hold C to D	fall	0.36
	rise	0.71
Setup C to E	fall	1.49
	rise	0.45
Hold C to E	fall	0.72
	rise	1.11
Setup C to SD	fall	0.95
	rise	0.33
Hold C to SD	fall	0.55
	rise	0.74
Setup C to SE	fall	1.44
	rise	0.29
Hold C to SE	fall	0.93
	rise	1.13
Recovery C to SN	rise	0.74
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6710
D	8.9530
E	6.5650
SD	8.9990
SE	6.7680
SN	11.1080

Leakage [pW]	
C	3.35

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	191.46	205.38	183.12	205.97
	rise	191.80	196.70	190.46	203.06
C to QN	fall	191.80	196.70	190.46	203.06
	rise	191.46	205.38	183.12	205.97
SN to Q	rise	309.91	324.45	889.14	893.00
SN to QN	fall	309.91	324.45	889.14	893.00

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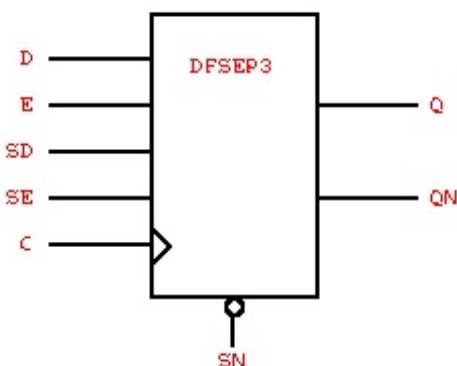
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	455.000 μm^2
Equation	$Q = "((!(\text{SN})) + (((((!\text{SE}) * \text{E}) * \text{D}) + (\text{SE} * \text{SD})) + !((!(\text{PreviousFlipFlopState}) + (\text{!SE} * \text{E})) + \text{SE})))"$ $\text{QN} = "((!(\text{ISN})) + (((((!\text{SE}) * \text{E}) * \text{D}) + (\text{SE} * \text{SD})) + !((!(\text{PreviousFlipFlopState}) + (\text{!SE} * \text{E})) + \text{SE}))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, E, SD, SE
Output	Q, QN



State Table										
C	D	E	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	H	-	-	L	H	
R	H	H	-	L	H	-	-	H	L	
R	-	-	L	H	H	-	-	L	H	
R	-	-	H	H	H	-	-	H	L	
F	-	H	-	L	H	L	H	L	H	
F	-	H	-	L	H	H	L	H	L	
F	-	-	-	H	H	L	H	L	H	
F	-	-	-	H	H	H	L	H	L	
-	-	L	-	L	H	L	H	L	H	
-	-	L	-	L	H	H	L	H	L	
-	-	-	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.67	1.27	0.85	1.45
	rise	0.61	1.43	0.83	1.65
C to QN	fall	0.82	1.35	1.04	1.57
	rise	0.78	1.58	0.96	1.76
SN to Q	rise	0.63	1.51	1.79	2.64
SN to QN	fall	0.26	0.82	1.35	1.96

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.10	0.74	0.10	0.74
	rise	0.11	1.28	0.11	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
SN to Q	rise	0.12	1.30	0.13	1.30
SN to QN	fall	0.09	0.72	0.17	0.74

Constraints Time [ns]		
Setup C to D	fall	1.10
	rise	0.48
Hold C to D	fall	0.36
	rise	0.71
Setup C to E	fall	1.49
	rise	0.45
Hold C to E	fall	0.72
	rise	1.11
Setup C to SD	fall	0.95
	rise	0.33
Hold C to SD	fall	0.55
	rise	0.74
Setup C to SE	fall	1.43
	rise	0.29
Hold C to SE	fall	0.93
	rise	1.13
Recovery C to SN	rise	0.82
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6730
D	8.8580
E	6.5570
SD	8.9990
SE	6.7650
SN	11.1470

Leakage [pW]	
C	3.65

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	310.18	299.72	303.19	301.64
	rise	302.16	283.68	302.53	290.44
C to QN	fall	302.16	283.68	302.53	290.44
	rise	310.18	299.72	303.19	301.64
SN to Q	rise	424.47	413.25	1074.25	997.04
SN to QN	fall	424.47	413.25	1074.25	997.04

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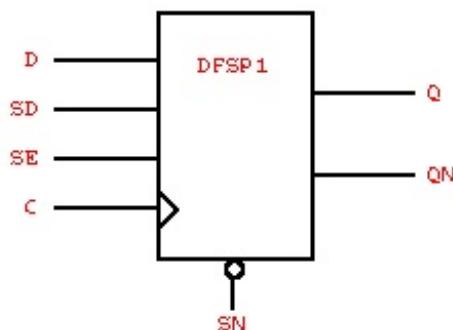
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	382.200 um ²
Equation	$Q = "((!SN)+(((D * !SE) + (SD * SE))))"$ $QN = "((!(!SN)+(((D * !SE) + (SD * SE)))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table								
C	D	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN
R	L	-	L	H	-	-	L	H
R	H	-	L	H	-	-	H	L
R	-	L	H	H	-	-	L	H
R	-	H	H	H	-	-	H	L
F	-	-	-	H	L	H	L	H
F	-	-	-	H	H	L	H	L
-	-	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.54	1.09	0.72	1.28
	rise	0.50	1.32	0.72	1.54
C to QN	fall	0.63	1.17	0.85	1.39
	rise	0.62	1.44	0.81	1.63
SN to Q	rise	0.41	1.23	1.47	2.28
SN to QN	fall	0.22	0.78	1.26	1.85

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
C to QN	fall	0.07	0.75	0.07	0.75
	rise	0.09	1.32	0.09	1.32
SN to Q	rise	0.10	1.32	0.10	1.32
SN to QN	fall	0.08	0.75	0.16	0.75

Constraints Time [ns]		
Setup C to D	fall	1.22
	rise	0.69
Hold C to D	fall	0.13
	rise	0.83
Setup C to SD	fall	0.96
	rise	0.34
Hold C to SD	fall	0.54
	rise	0.74
Setup C to SE	fall	1.47
	rise	0.30
Hold C to SE	fall	0.94
	rise	1.15
Recovery C to SN	rise	0.92
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6710
D	3.8170
SD	9.0080
SE	6.8020
SN	11.1340

Leakage [pW]	
	3.09

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	241.77	243.34	375.27	387.94
	rise	235.81	242.80	375.98	393.84
C to QN	fall	235.81	242.80	375.98	393.84
	rise	241.77	243.34	375.27	387.94
SN to Q	rise	262.72	262.31	795.88	788.00
SN to QN	fall	262.72	262.31	795.88	788.00

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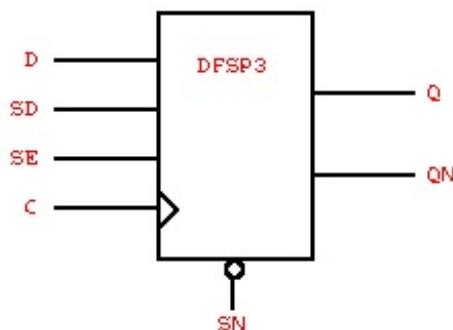
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	400.400 um ²
Equation	$Q = "((!SN)+(((D * !SE) + (SD * SE))))"$ $QN = "((!(!SN)+(((D * !SE) + (SD * SE)))))"$
Clock	C
Set	SN
Type	Sequential
Input	D, SD, SE
Output	Q, QN



State Table								
C	D	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN
R	L	-	L	H	-	-	L	H
R	H	-	L	H	-	-	H	L
R	-	L	H	H	-	-	L	H
R	-	H	H	H	-	-	H	L
F	-	-	-	H	L	H	L	H
F	-	-	-	H	H	L	H	L
-	-	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.58	1.13	0.76	1.31
	rise	0.53	1.34	0.75	1.56
C to QN	fall	0.72	1.25	0.94	1.47
	rise	0.69	1.49	0.87	1.67
SN to Q	rise	0.51	1.30	1.63	2.40
SN to QN	fall	0.26	0.81	1.34	1.93

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
SN to Q	rise	0.09	1.28	0.10	1.28
SN to QN	fall	0.09	0.72	0.17	0.72

Constraints Time [ns]		
Setup C to D	fall	1.22
	rise	0.68
Hold C to D	fall	0.13
	rise	0.83
Setup C to SD	fall	0.96
	rise	0.34
Hold C to SD	fall	0.54
	rise	0.75
Setup C to SE	fall	1.47
	rise	0.29
Hold C to SE	fall	0.95
	rise	1.15
Recovery C to SN	rise	1.00
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6700
D	3.8210
SD	8.9150
SE	6.8060
SN	11.1250

Leakage [pW]	
3.39	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	345.18	335.38	480.55	479.32
	rise	333.89	327.92	476.75	479.54
C to QN	fall	333.89	327.92	476.75	479.54
	rise	345.18	335.38	480.55	479.32
SN to Q	rise	370.00	348.96	974.40	889.74
SN to QN	fall	370.00	348.96	974.40	889.74

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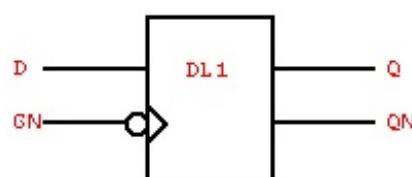
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with drive strength X1			
Strength	1			
Cell Area	200.200 μm^2			
Equation	$Q = "(D)"$ $QN = "(!D)"$			
Enable	GN			
Type	Sequential			
Input	D			
Output	Q, QN			



State Table					
D	GN	IQ _(int)	IQN _(int)	Q	QN
L	L	-	-	L	H
H	L	-	-	H	L
-	H	L	H	L	H
-	H	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	0.44	0.97	1.31	1.84
	rise	0.41	1.23	0.50	1.31
D to QN	fall	0.32	0.86	0.40	0.95
	rise	0.37	1.19	1.24	2.06
GN to Q	fall	0.40	0.93	1.30	1.84
	rise	0.42	1.24	1.10	1.92
GN to QN	fall	0.33	0.87	1.01	1.56
	rise	0.32	1.15	1.23	2.05

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
D to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.10	1.32
GN to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
GN to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.10	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.54
	rise	0.90
Hold GN to D	fall	0.31
	rise	0.51

Capacitance [fF]	
D	4.5120
GN	6.9400

Leakage [pW]	
1.63	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	176.74	183.13	368.78	394.14
	rise	162.02	162.32	324.80	351.97
D to QN	fall	162.02	162.32	324.80	351.97
	rise	176.74	183.13	368.78	394.14
GN to Q	fall	173.66	179.83	438.29	458.13
	rise	192.98	193.40	382.09	402.53
GN to QN	fall	192.98	193.40	382.09	402.53
	rise	173.66	179.83	438.29	458.13

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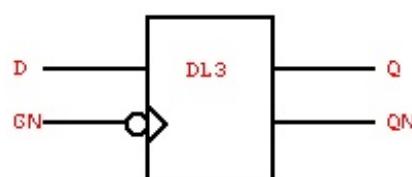
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with drive strength X3		
Strength	3		
Cell Area	200.200 μm^2		
Equation	$Q = "(D)"$ $QN = "!(D)"$		
Enable	GN		
Type	Sequential		
Input	D		
Output	Q, QN		



State Table					
D	GN	IQ _(int)	IQN _(int)	Q	QN
L	L	-	-	L	H
H	L	-	-	H	L
-	H	L	H	L	H
-	H	H	L	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.54	1.06	1.43
	rise	0.51	1.30	0.61
D to QN	fall	0.37	0.90	0.46
	rise	0.41	1.21	1.29
GN to Q	fall	0.50	1.02	1.42
	rise	0.52	1.31	1.19
GN to QN	fall	0.38	0.91	1.06
	rise	0.36	1.17	1.29
				2.09

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07
	rise	0.09	1.28	0.09
D to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.10
GN to Q	fall	0.07	0.71	0.07
	rise	0.09	1.28	0.08
GN to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.10

Constraints Time [ns]		
Setup GN to D	fall	2.58
	rise	0.91
Hold GN to D	fall	0.26
	rise	0.50

Capacitance [fF]	
D	4.5090
GN	6.9360

Leakage [pW]	
1.94	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	286.09	281.73	490.99
	rise	270.18	257.57	442.73
D to QN	fall	270.18	257.57	442.73
	rise	286.09	281.73	490.99
GN to Q	fall	281.62	277.95	562.51
	rise	301.38	287.09	495.00
GN to QN	fall	301.38	287.09	495.00
	rise	281.62	277.95	562.51
				559.73

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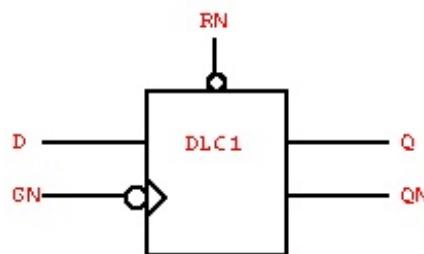
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, and drive strength X1			
Strength	1			
Cell Area	218.400 um ²			
Equation	$Q = "(!(!RN)*(D))"$ $QN = "((!RN)+!(D))"$			
Enable	GN			
Reset	RN			
Type	Sequential			
Input	D			
Output	Q, QN			



State Table							
D	GN	RN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	-	-	L	H	
H	L	H	-	-	H	L	
-	H	H	L	H	L	H	
-	H	H	H	L	H	L	
-	-	L	-	-	L	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.49	1.02	1.63	2.17
	rise	0.37	1.19	-0.02	0.80
D to QN	fall	0.30	0.85	-0.09	0.46
	rise	0.38	1.20	1.52	2.34
GN to Q	fall	0.43	0.97	1.34	1.87
	rise	0.39	1.21	1.08	1.90
GN to QN	fall	0.33	0.87	1.01	1.56
	rise	0.32	1.15	1.23	2.05
RN to Q	fall	0.20	0.76	1.22	1.80
	rise	0.36	1.18	0.26	1.11
RN to QN	fall	0.30	0.84	0.07	0.62
	rise	0.38	1.20	1.42	2.23

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
D to QN	fall	0.07	0.74	0.08	0.74
	rise	0.09	1.32	0.10	1.32
GN to Q	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
GN to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.10	1.32
RN to Q	fall	0.08	0.75	0.15	0.75
	rise	0.09	1.32	0.10	1.34
RN to QN	fall	0.07	0.74	0.08	0.74
	rise	0.09	1.32	0.10	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.73
	rise	1.01
Hold GN to D	fall	0.79
	rise	0.79
Recovery GN to RN	rise	1.04
Removal GN to RN	rise	0.15

Capacitance [fF]	
D	6.6330
GN	6.4870
RN	11.4060

Leakage [pW]	
1.67	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	232.14	237.51	556.07	575.46
	rise	164.73	166.18	384.19	472.98
D to QN	fall	164.73	166.18	384.19	472.98
	rise	232.14	237.51	556.07	575.46
GN to Q	fall	201.09	206.38	473.42	490.82
	rise	197.80	199.25	386.32	409.48
GN to QN	fall	197.80	199.25	386.32	409.48
	rise	201.09	206.38	473.42	490.82
RN to Q	fall	211.01	211.05	704.54	706.77
	rise	151.48	153.39	428.33	535.47
RN to QN	fall	151.48	153.39	428.33	535.47
	rise	211.01	211.05	704.54	706.77

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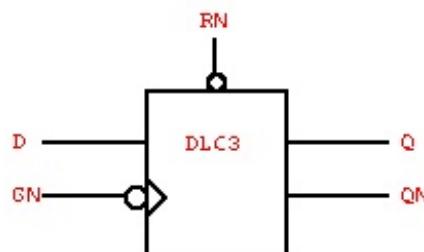
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, and drive strength X3			
Strength	3			
Cell Area	218.400 um ²			
Equation	$Q = "(!(!RN)*(D))"$ $QN = "((!RN)+!(D))"$			
Enable	GN			
Reset	RN			
Type	Sequential			
Input	D			
Output	Q, QN			



State Table							
D	GN	RN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	-	-	L	H	
H	L	H	-	-	H	L	
-	H	H	L	H	L	H	
-	H	H	H	L	H	L	
-	-	L	-	-	L	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.59	1.11	1.74	2.27
	rise	0.44	1.24	0.06	0.86
D to QN	fall	0.35	0.89	-0.04	0.51
	rise	0.41	1.22	1.57	2.37
GN to Q	fall	0.53	1.06	1.45	1.98
	rise	0.47	1.26	1.15	1.95
GN to QN	fall	0.37	0.91	1.06	1.60
	rise	0.36	1.16	1.28	2.08
RN to Q	fall	0.25	0.80	1.32	1.91
	rise	0.44	1.23	0.38	1.20
RN to QN	fall	0.34	0.88	0.12	0.67
	rise	0.49	1.28	1.60	2.37

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
D to QN	fall	0.08	0.71	0.08	0.72
	rise	0.09	1.28	0.10	1.28
GN to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
GN to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.10	1.28
RN to Q	fall	0.08	0.71	0.16	0.72
	rise	0.08	1.28	0.10	1.30
RN to QN	fall	0.08	0.71	0.08	0.72
	rise	0.09	1.28	0.10	1.28

Constraints Time [ns]		
Setup GN to D	fall	2.78
	rise	1.01
Hold GN to D	fall	0.74
	rise	0.78
Recovery GN to RN	rise	1.04
Removal GN to RN	rise	0.12

Capacitance [fF]	
D	6.6250
GN	6.5030
RN	11.4110

Leakage [pW]	
1.99	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	340.54	334.67	675.89	671.21
	rise	265.10	255.69	498.28	561.54
D to QN	fall	265.10	255.69	498.28	561.54
	rise	340.54	334.67	675.89	671.21
GN to Q	fall	308.79	302.81	596.98	590.08
	rise	298.30	288.76	490.10	499.24
GN to QN	fall	298.30	288.76	490.10	499.24
	rise	308.79	302.81	596.98	590.08
RN to Q	fall	330.68	310.27	900.78	823.04
	rise	252.03	243.35	564.22	619.53
RN to QN	fall	252.03	243.35	564.22	619.53
	rise	330.68	310.27	900.78	823.04

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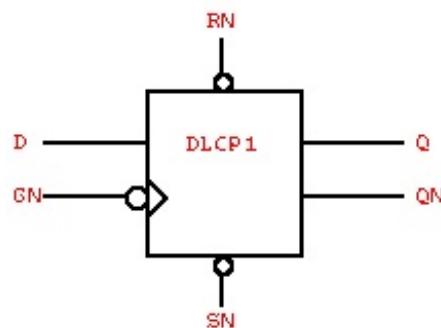
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	236.600 μm^2
Equation	$Q = "(!(!RN)*(D)+(!SN))"$ $QN = "(!(!SN)*(!D)+(!RN))"$
Enable	GN
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table								
D	GN	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	H	-	-	L	H	
H	L	H	H	-	-	H	L	
-	H	H	H	L	H	L	H	
-	H	H	H	H	L	H	L	
-	-	L	L	-	-	L	L	
-	-	L	H	-	-	L	H	
-	-	H	L	-	-	H	L	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
D to Q	fall	0.46	0.99	1.58
	rise	0.42	1.24	0.06
D to QN	fall	0.35	0.90	-0.00
	rise	0.34	1.17	1.46
GN to Q	fall	0.41	0.95	1.27
	rise	0.44	1.26	1.13
GN to QN	fall	0.38	0.93	1.07
	rise	0.30	1.12	1.15
RN to Q	fall	0.21	0.78	1.24
	rise	0.41	1.23	0.33
RN to QN	fall	0.35	0.90	0.16
	rise	0.35	1.17	1.35
SN to Q	fall	0.25	0.78	0.03
	rise	0.29	1.12	1.27
SN to QN	fall	0.18	0.73	1.17
	rise	0.14	0.96	-0.11

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
D to Q	fall	0.07	0.74	0.07
	rise	0.09	1.32	0.09
D to QN	fall	0.08	0.74	0.08
	rise	0.09	1.32	0.10
GN to Q	fall	0.07	0.74	0.07
	rise	0.09	1.32	0.09
GN to QN	fall	0.08	0.74	0.08
	rise	0.09	1.32	0.10
RN to Q	fall	0.08	0.76	0.15
	rise	0.10	1.32	0.15
RN to QN	fall	0.08	0.74	0.08
	rise	0.09	1.32	0.10
SN to Q	fall	0.06	0.74	0.07
	rise	0.10	1.32	0.10
SN to QN	fall	0.07	0.74	0.14
	rise	0.09	1.32	0.14

Constraints Time [ns]		
Setup GN to D	fall	2.63
	rise	1.07
Hold GN to D	fall	0.71
	rise	0.78
Recovery GN to RN	rise	1.09
Removal GN to RN	rise	0.07
Recovery GN to SN	rise	0.89
Removal GN to SN	rise	0.37

Capacitance [fF]	
D	6.6190
GN	6.4820
RN	12.0540
SN	5.7390

Leakage [pW]	
1.79	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	238.34	247.34	563.62	592.60
	rise	192.46	194.06	424.39	503.56
D to QN	fall	192.46	194.06	424.39	503.56
	rise	238.34	247.34	563.62	592.60
GN to Q	fall	207.76	215.87	473.54	498.60
	rise	225.33	226.69	417.13	437.53
GN to QN	fall	225.33	226.69	417.13	437.53
	rise	207.76	215.87	473.54	498.60
RN to Q	fall	230.80	254.22	885.97	973.42
	rise	115.80	120.66	635.28	859.06
RN to QN	fall	179.32	180.96	462.02	556.59
	rise	217.37	221.63	703.29	716.49
SN to Q	fall	112.40	117.57	356.11	426.53
	rise	163.46	164.22	469.12	468.30
SN to QN	fall	170.95	179.63	606.38	650.21
	rise	87.05	90.13	455.95	597.94

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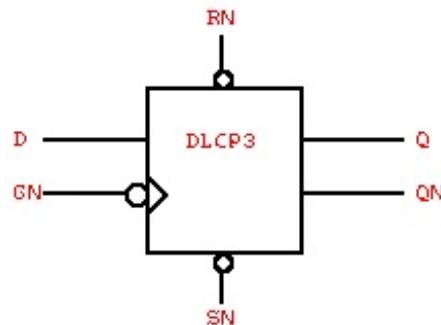
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	236.600 μm^2
Equation	$Q = "(!(!RN)*(D)+(!SN))"$ $QN = "(!(!SN)*(!D)+(!RN))"$
Enable	GN
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table								
D	GN	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	H	-	-	L	H	
H	L	H	H	-	-	H	L	
-	H	H	H	L	H	L	H	
-	H	H	H	H	L	H	L	
-	-	L	L	-	-	L	L	
-	-	L	H	-	-	L	H	
-	-	H	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
D to Q	fall	0.55	1.07	1.67	2.20
	rise	0.49	1.29	0.14	0.94
D to QN	fall	0.40	0.94	0.04	0.60
	rise	0.37	1.18	1.49	2.30
GN to Q	fall	0.50	1.03	1.37	1.89
	rise	0.52	1.31	1.21	2.00
GN to QN	fall	0.42	0.97	1.12	1.67
	rise	0.33	1.13	1.19	2.00
RN to Q	fall	0.25	0.83	1.34	1.98
	rise	0.49	1.28	0.45	1.27
RN to QN	fall	0.39	0.94	0.21	0.76
	rise	0.43	1.23	1.50	2.28
SN to Q	fall	0.33	0.86	0.21	0.72
	rise	0.37	1.18	1.42	2.21
SN to QN	fall	0.23	0.77	1.27	1.90
	rise	0.16	0.97	-0.01	0.83

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
D to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
D to QN	fall	0.08	0.72	0.09	0.72
	rise	0.09	1.28	0.10	1.28
GN to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
GN to QN	fall	0.08	0.72	0.09	0.72
	rise	0.09	1.28	0.10	1.28
RN to Q	fall	0.08	0.73	0.16	0.77
	rise	0.09	1.28	0.16	1.32
RN to QN	fall	0.08	0.72	0.09	0.72
	rise	0.09	1.28	0.10	1.28
SN to Q	fall	0.07	0.71	0.08	0.71
	rise	0.10	1.28	0.10	1.28
SN to QN	fall	0.08	0.71	0.16	0.75
	rise	0.09	1.28	0.15	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.66
	rise	1.07
Hold GN to D	fall	0.68
	rise	0.77
Recovery GN to RN	rise	1.10
Removal GN to RN	rise	0.05
Recovery GN to SN	rise	0.91
Removal GN to SN	rise	0.27

Capacitance [fF]	
D	6.6180
GN	6.4910
RN	12.0140
SN	5.6940

Leakage [pW]	
	2.08

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	344.49	343.71	681.25	686.52
	rise	298.83	286.16	543.08	595.21
D to QN	fall	298.83	286.16	543.08	595.21
	rise	344.49	343.71	681.25	686.52
GN to Q	fall	313.27	312.10	593.14	596.82
	rise	331.62	320.01	526.60	530.57
GN to QN	fall	331.62	320.01	526.60	530.57
	rise	313.27	312.10	593.14	596.82
RN to Q	fall	340.48	352.93	1099.37	1086.96
	rise	203.35	203.10	856.74	961.29
RN to QN	fall	285.89	273.82	600.61	643.22
	rise	334.22	320.78	887.91	830.27
SN to Q	fall	213.91	214.92	549.74	537.44
	rise	270.53	257.57	652.57	579.20
SN to QN	fall	270.68	274.30	807.85	761.04
	rise	180.65	180.22	680.37	710.35

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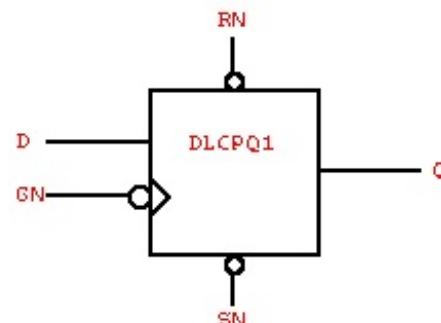
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	200.200 um ²
Equation	$Q = "(!(!RN)*((D)+(!SN)))"$
Enable	GN
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q



State Table							
D	GN	RN	SN	IQ _(int)	IQN _(int)	Q	
L	L	H	H	-	-	L	
H	L	H	H	-	-	H	
-	H	H	H	L	H	L	
-	H	H	H	H	L	H	
-	-	L	-	-	-	L	
-	-	H	L	-	-	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.43	0.97	1.27	1.81
	rise	0.42	1.24	0.55	1.37
GN to Q	fall	0.40	0.93	1.26	1.79
	rise	0.43	1.25	1.12	1.95
RN to Q	fall	0.21	0.78	1.24	1.89
	rise	0.15	0.99	-0.01	0.86
SN to Q	fall	0.23	0.76	-0.06	0.47
	rise	0.25	1.09	1.18	2.01

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.06	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
GN to Q	fall	0.06	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.76	0.15	0.80
	rise	0.10	1.32	0.15	1.37
SN to Q	fall	0.06	0.74	0.07	0.74
	rise	0.10	1.32	0.10	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.46
	rise	0.75
Hold GN to D	fall	0.25
	rise	0.49
Recovery GN to RN	rise	-0.12
Removal GN to RN	rise	1.09
Recovery GN to SN	rise	0.63
Removal GN to SN	rise	0.37

Capacitance [fF]	
D	4.4760
GN	6.3360
RN	5.8000
SN	5.5300

Leakage [pW]	
1.56	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	360.93	384.62	749.40	828.23
	rise	316.05	320.53	655.23	712.00
GN to Q	fall	358.42	380.30	872.45	932.27
	rise	380.47	385.03	761.14	804.14
RN to Q	fall	188.13	222.41	743.75	813.61
	rise	87.53	89.77	481.83	646.54
SN to Q	fall	169.69	179.80	587.29	768.68
	rise	253.31	256.04	809.04	848.35

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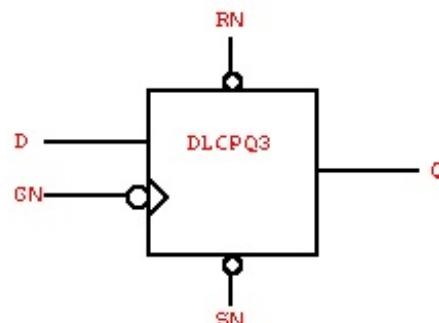
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	200.200 um ²
Equation	$Q = "(!(!RN)*((D)+(!SN)))"$
Enable	GN
Reset	RN
Set	SN
Type	Sequential
Input	D
Output	Q



State Table							
D	GN	RN	SN	IQ _(int)	IQN _(int)	Q	
L	L	H	H	-	-	L	
H	L	H	H	-	-	H	
-	H	H	H	L	H	L	
-	H	H	H	H	L	H	
-	-	L	-	-	-	L	
-	-	H	L	-	-	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.48	1.01	1.32	1.85
	rise	0.44	1.25	0.58	1.38
GN to Q	fall	0.44	0.98	1.30	1.84
	rise	0.45	1.26	1.15	1.95
RN to Q	fall	0.26	0.83	1.34	1.98
	rise	0.18	0.99	0.08	0.93
SN to Q	fall	0.28	0.81	-0.01	0.52
	rise	0.28	1.10	1.21	2.02

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.08	0.71
	rise	0.08	1.28	0.09	1.28
GN to Q	fall	0.07	0.71	0.08	0.71
	rise	0.08	1.28	0.08	1.28
RN to Q	fall	0.09	0.73	0.16	0.77
	rise	0.10	1.28	0.16	1.32
SN to Q	fall	0.07	0.71	0.08	0.71
	rise	0.10	1.28	0.10	1.28

Constraints Time [ns]		
Setup GN to D	fall	2.46
	rise	0.71
Hold GN to D	fall	0.24
	rise	0.48
Recovery GN to RN	rise	-0.11
Removal GN to RN	rise	1.01
Recovery GN to SN	rise	0.59
Removal GN to SN	rise	0.36

Capacitance [fF]	
D	4.4760
GN	6.3440
RN	5.7540
SN	5.5330

Leakage [pW]	
1.70	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	467.38	486.85	863.89	929.16
	rise	407.32	410.28	749.09	799.31
GN to Q	fall	464.77	482.52	982.42	1032.54
	rise	471.83	474.76	853.39	892.73
RN to Q	fall	299.35	329.25	968.76	938.15
	rise	179.79	180.15	715.85	760.16
SN to Q	fall	273.49	282.75	706.94	867.94
	rise	349.46	346.82	918.18	941.41

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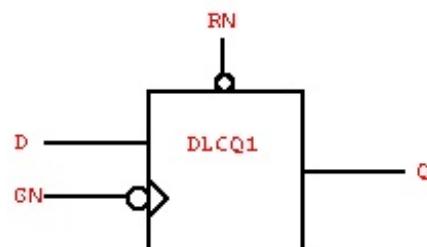
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, and drive strength X1			
Strength	1			
Cell Area	182.000 um ²			
Equation	$Q = "(!(!RN)*(D))"$			
Enable	GN			
Reset	RN			
Type	Sequential			
Input	D			
Output	Q			



State Table					
D	GN	RN	IQ(int)	IQN(int)	Q
L	L	H	-	-	L
H	L	H	-	-	H
-	H	H	L	H	L
-	H	H	H	L	H
-	-	L	-	-	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	0.45	0.99	1.32	1.85
	rise	0.36	1.18	0.44	1.26
GN to Q	fall	0.41	0.95	1.32	1.85
	rise	0.37	1.19	1.06	1.89
RN to Q	fall	0.20	0.76	1.22	1.79
	rise	0.12	0.94	-0.21	0.67

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	0.06	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
GN to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.75	0.15	0.79
	rise	0.08	1.32	0.13	1.37

Constraints Time [ns]		
Setup GN to D	fall	2.52
	rise	0.73
Hold GN to D	fall	0.34
	rise	0.51
Recovery GN to RN	rise	-0.14
Removal GN to RN	rise	1.11

Capacitance [fF]	
D	4.3330
GN	6.3570
RN	5.2110

Leakage [pW]	
1.37	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
D to Q	fall	347.43	364.41	728.33	787.31
	rise	258.52	262.07	576.73	644.53
GN to Q	fall	345.32	361.31	869.72	915.68
	rise	325.62	329.22	699.35	747.00
RN to Q	fall	200.20	248.00	774.90	837.67
	rise	71.37	73.07	452.11	639.76

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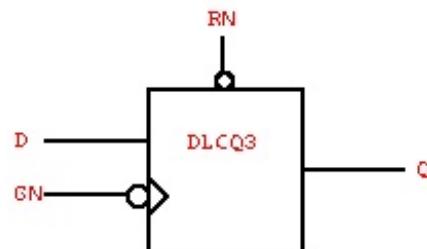
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low reset, and drive strength X3		
Strength	3		
Cell Area	182.000 um ²		
Equation	$Q = "(!(!RN)*(D))"$		
Enable	GN		
Reset	RN		
Type	Sequential		
Input	D		
Output	Q		



State Table					
D	GN	RN	IQ(int)	IQN(int)	Q
L	L	H	-	-	L
H	L	H	-	-	H
-	H	H	L	H	L
-	H	H	H	L	H
-	-	L	-	-	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.49	1.03	1.36	1.90
	rise	0.38	1.19	0.47	1.27
GN to Q	fall	0.46	0.99	1.36	1.89
	rise	0.40	1.20	1.09	1.89
RN to Q	fall	0.25	0.79	1.33	1.88
	rise	0.14	0.94	-0.08	0.76

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
GN to Q	fall	0.07	0.71	0.07	0.71
	rise	0.08	1.28	0.08	1.28
RN to Q	fall	0.08	0.71	0.16	0.75
	rise	0.08	1.28	0.14	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.52
	rise	0.68
Hold GN to D	fall	0.34
	rise	0.50
Recovery GN to RN	rise	-0.13
Removal GN to RN	rise	1.04

Capacitance [fF]	
D	4.3320
GN	6.3740
RN	5.1940

Leakage [pW]	
1.50	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	444.02	458.57	829.10	880.37
	rise	347.33	347.40	668.39	731.27
GN to Q	fall	442.05	455.40	968.64	1007.73
	rise	414.34	415.10	788.46	833.65
RN to Q	fall	303.83	349.11	998.14	964.22
	rise	159.15	159.67	676.22	743.32

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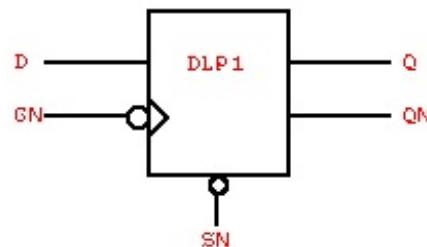
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low set, and drive strength X1
Strength	1
Cell Area	200.200 μm^2
Equation	$Q = "((!SN)+(D))"$ $QN = "(!((!SN)+(D)))"$
Enable	GN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table							
D	GN	SN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	-	-	L	H	
H	L	H	-	-	H	L	
-	H	H	L	H	L	H	
-	H	H	H	L	H	L	
-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.41	0.94	1.26	1.79
	rise	0.47	1.28	0.60	1.42
D to QN	fall	0.38	0.92	0.51	1.06
	rise	0.34	1.16	1.18	2.00
GN to Q	fall	0.38	0.91	1.24	1.77
	rise	0.47	1.29	1.17	1.99
GN to QN	fall	0.38	0.93	1.08	1.63
	rise	0.30	1.13	1.16	1.99
SN to Q	fall	0.21	0.74	-0.05	0.48
	rise	0.32	1.15	1.34	2.15
SN to QN	fall	0.17	0.72	1.15	1.78
	rise	0.13	0.96	-0.14	0.74

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
D to QN	fall	0.07	0.74	0.08	0.74
	rise	0.09	1.32	0.10	1.32
GN to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
GN to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.10	1.32
SN to Q	fall	0.06	0.74	0.07	0.74
	rise	0.10	1.32	0.11	1.32
SN to QN	fall	0.07	0.74	0.14	0.78
	rise	0.09	1.32	0.14	1.36

Constraints Time [ns]		
Setup GN to D	fall	2.48
	rise	0.96
Hold GN to D	fall	0.22
	rise	0.49
Recovery GN to SN	rise	0.89
Removal GN to SN	rise	0.40

Capacitance [fF]	
D	4.3930
GN	6.4730
SN	5.2240

Leakage [pW]	
1.65	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	183.26	194.54	377.56	415.27
	rise	189.54	189.90	362.35	383.78
D to QN	fall	189.54	189.90	362.35	383.78
	rise	183.26	194.54	377.56	415.27
GN to Q	fall	181.31	191.97	438.97	467.75
	rise	221.67	221.50	414.27	431.40
GN to QN	fall	221.67	221.50	414.27	431.40
	rise	181.31	191.97	438.97	467.75
SN to Q	fall	88.08	93.04	315.38	398.15
	rise	158.80	158.38	466.01	460.09
SN to QN	fall	158.80	158.38	466.01	460.09
	rise	88.08	93.04	315.38	398.15

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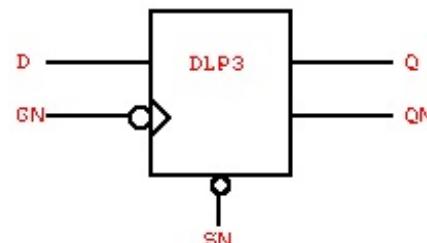
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low set, and drive strength X3
Strength	3
Cell Area	200.200 μm^2
Equation	$Q = "((!SN)+(D))"$ $QN = "(!((!SN)+(D)))"$
Enable	GN
Set	SN
Type	Sequential
Input	D
Output	Q, QN



State Table							
D	GN	SN	IQ _(int)	IQN _(int)	Q	QN	
L	L	H	-	-	L	H	
H	L	H	-	-	H	L	
-	H	H	L	H	L	H	
-	H	H	H	L	H	L	
-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.50	1.02	1.36	1.88
	rise	0.57	1.36	0.71	1.50
D to QN	fall	0.42	0.96	0.56	1.11
	rise	0.37	1.17	1.22	2.02
GN to Q	fall	0.47	0.99	1.34	1.86
	rise	0.58	1.36	1.26	2.05
GN to QN	fall	0.43	0.97	1.13	1.67
	rise	0.33	1.14	1.20	2.01
SN to Q	fall	0.29	0.81	0.13	0.64
	rise	0.42	1.22	1.52	2.29
SN to QN	fall	0.22	0.76	1.26	1.87
	rise	0.15	0.96	-0.04	0.81

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28
D to QN	fall	0.08	0.72	0.09	0.72
	rise	0.09	1.28	0.10	1.28
GN to Q	fall	0.07	0.71	0.07	0.71
	rise	0.09	1.28	0.09	1.28
GN to QN	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.10	1.28
SN to Q	fall	0.07	0.71	0.08	0.71
	rise	0.10	1.28	0.10	1.28
SN to QN	fall	0.07	0.71	0.15	0.75
	rise	0.09	1.28	0.15	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.50
	rise	0.97
Hold GN to D	fall	0.17
	rise	0.48
Recovery GN to SN	rise	0.93
Removal GN to SN	rise	0.31

Capacitance [fF]	
D	4.3980
GN	6.4700
SN	5.2190

Leakage [pW]	
1.97	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
D to Q	fall	291.02	293.34	499.44	511.99
	rise	301.13	283.42	481.40	475.75
D to QN	fall	301.13	283.42	481.40	475.75
	rise	291.02	293.34	499.44	511.99
GN to Q	fall	288.15	290.77	559.81	568.60
	rise	333.02	316.03	530.11	525.30
GN to QN	fall	333.02	316.03	530.11	525.30
	rise	288.15	290.77	559.81	568.60
SN to Q	fall	189.74	193.63	508.70	510.32
	rise	270.68	252.88	657.17	573.00
SN to QN	fall	270.68	252.88	657.17	573.00
	rise	189.74	193.63	508.70	510.32

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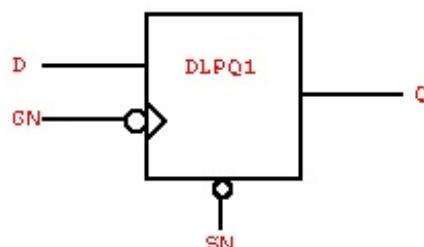
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low set, and drive strength X1
Strength	1
Cell Area	182.000 um ²
Equation	$Q = "((!SN)+(D))"$
Enable	GN
Set	SN
Type	Sequential
Input	D
Output	Q



State Table					
D	GN	SN	IQ _(int)	IQN _(int)	Q
L	L	H	-	-	L
H	L	H	-	-	H
-	H	H	L	H	L
-	H	H	H	L	H
-	-	L	-	-	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.39	0.92	1.22	1.75
	rise	0.43	1.25	0.56	1.38
GN to Q	fall	0.35	0.88	1.20	1.73
	rise	0.43	1.26	1.13	1.95
SN to Q	fall	0.19	0.72	-0.15	0.38
	rise	0.27	1.11	1.22	2.05

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
GN to Q	fall	0.06	0.74	0.06	0.74
	rise	0.09	1.32	0.09	1.32
SN to Q	fall	0.06	0.74	0.07	0.74
	rise	0.10	1.32	0.10	1.32

Constraints Time [ns]		
Setup GN to D	fall	2.46
	rise	0.70
Hold GN to D	fall	0.25
	rise	0.49
Recovery GN to SN	rise	0.61
Removal GN to SN	rise	0.46

Capacitance [fF]	
D	4.3970
GN	6.5000
SN	5.2340

Leakage [pW]	
1.46	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
D to Q	fall	313.44	339.49	693.58	784.16
	rise	299.59	302.30	640.54	693.03
GN to Q	fall	310.13	333.66	813.59	879.14
	rise	363.80	366.40	745.30	785.29
SN to Q	fall	126.33	134.73	514.35	713.33
	rise	237.11	237.79	792.77	825.05

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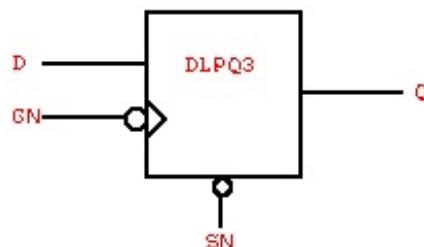
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with active low set, and drive strength X3
Strength	3
Cell Area	182.000 um ²
Equation	$Q = "((!SN)+(D))"$
Enable	GN
Set	SN
Type	Sequential
Input	D
Output	Q



State Table					
D	GN	SN	IQ _(int)	IQN _(int)	Q
L	L	H	-	-	L
H	L	H	-	-	H
-	H	H	L	H	L
-	H	H	H	L	H
-	-	L	-	-	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.43	0.96	1.27
	rise	0.46	1.26	0.60
GN to Q	fall	0.40	0.93	1.25
	rise	0.47	1.27	1.16
SN to Q	fall	0.24	0.76	-0.10
	rise	0.31	1.12	1.26
				2.07

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07
	rise	0.08	1.28	0.09
GN to Q	fall	0.07	0.71	0.07
	rise	0.08	1.28	0.08
SN to Q	fall	0.07	0.71	0.07
	rise	0.10	1.28	0.10
				1.28

Constraints Time [ns]		
Setup GN to D	fall	2.45
	rise	0.66
Hold GN to D	fall	0.24
	rise	0.48
Recovery GN to SN	rise	0.57
Removal GN to SN	rise	0.43

Capacitance [fF]	
D	4.3930
GN	6.4860
SN	5.3020

Leakage [pW]	
1.64	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	412.80	436.25	801.65
	rise	393.05	391.26	736.33
GN to Q	fall	408.57	430.41	915.43
	rise	457.27	454.34	839.08
SN to Q	fall	220.98	232.33	627.95
	rise	337.10	328.23	910.13
				920.06

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with drive strength X1
Strength	1
Cell Area	182.000 μm^2
Equation	$Q = "D"$
Enable	GN
Type	Sequential
Input	D
Output	Q



State Table					
D	GN	$I_{Q(\text{int})}$	$I_{Q(\text{int})}$	Q	
L	L	-	-	L	
H	L	-	-	H	
-	H	L	H	L	
-	H	H	L	H	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
D to Q	fall	0.40	0.93	1.26
	rise	0.37	1.19	0.45
GN to Q	fall	0.36	0.89	1.25
	rise	0.37	1.20	1.06

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
D to Q	fall	0.06	0.74	0.06
	rise	0.08	1.32	0.09
GN to Q	fall	0.06	0.74	0.06
	rise	0.08	1.32	0.08

Constraints Time [ns]		
Setup GN to D	fall	2.51
	rise	0.68
Hold GN to D	fall	0.34
	rise	0.51

Capacitance [fF]	
D	4.5100
GN	6.9390

Leakage [pW]	
1.36	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
D to Q	fall	294.60	311.35	669.19
	rise	249.89	252.09	569.44
GN to Q	fall	289.37	304.79	802.96
	rise	312.42	313.91	686.37

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Low enable Latch with drive strength X3
Strength	3
Cell Area	182.000 μm^2
Equation	$Q = "(D)"$
Enable	GN
Type	Sequential
Input	D
Output	Q



State Table					
D	GN	$I_{Q(\text{int})}$	$I_{Q(\text{int})}$	Q	
L	L	-	-	L	
H	L	-	-	H	
-	H	L	H	L	
-	H	H	L	H	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.45	0.97	1.31
	rise	0.40	1.20	0.48
GN to Q	fall	0.41	0.93	1.30
	rise	0.41	1.21	1.09

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	0.07	0.71	0.07
	rise	0.08	1.28	0.08
GN to Q	fall	0.07	0.71	0.07
	rise	0.08	1.28	0.08

Constraints Time [ns]		
Setup GN to D	fall	2.50
	rise	0.63
Hold GN to D	fall	0.33
	rise	0.50

Capacitance [fF]	
D	4.5110
GN	6.9460

Leakage [pW]	
1.52	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
D to Q	fall	392.16	409.30	772.59
	rise	343.28	341.09	667.03
GN to Q	fall	386.40	402.70	903.67
	rise	405.17	401.00	780.04

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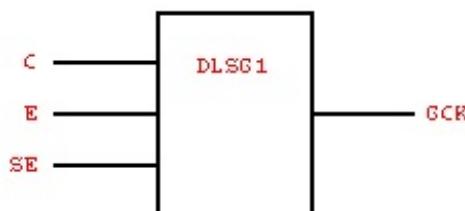
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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	218.400 um ²
Enable	E
Type	Sequential
Output	GCK



State Table				
C	E	SE	IQ _(int)	GCK
L	L	L	-	L
L	L	H	-	L
L	H	L	-	L
L	H	H	-	L
H	L	L	L	L
H	L	L	H	H
H	L	H	L	L
H	L	H	H	H
H	H	L	L	L
H	H	L	H	H
H	H	H	L	L
H	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to GCK	fall	0.19	0.73	1.29	1.89
	rise	0.14	0.96	-0.30	0.57

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to GCK	fall	0.07	0.74	0.14	0.77
	rise	0.09	1.31	0.15	1.36

Constraints Time [ns]		
Setup C to E	fall	2.03
	rise	1.92
Hold C to E	fall	0.09
	rise	0.28
Setup C to SE	fall	2.34
	rise	1.74
Hold C to SE	fall	-0.08
	rise	0.58

Capacitance [fF]	
C	14.5690
E	4.8480
SE	4.8940

Leakage [pW]	
1.70	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to GCK	fall	272.68	335.59	1217.35	1307.78
	rise	122.98	126.78	613.60	980.51

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	163.800 um ²
Equation	Q = "A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	1.48	2.15	2.50	3.17
	rise	1.52	2.22	1.88	2.58

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.14	0.81	0.14	0.81
	rise	0.13	1.06	0.13	1.06

Capacitance [fF]	
A	3.8280

Leakage [pW]	
	0.70

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	604.68	602.52	851.39	850.77
	rise	543.82	542.78	766.52	766.50

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	218.400 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	3.00	3.67	4.01	4.68
	rise	3.04	3.75	3.39	4.09

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.14	0.81	0.14	0.81
	rise	0.13	1.06	0.13	1.06

Capacitance [fF]	
A	3.2680

Leakage [pW]	
	0.84

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	987.73	993.50	1236.40	1243.20
	rise	941.80	944.62	1165.86	1169.74

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	309.400 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	4.54	5.21	5.55	6.22
	rise	4.59	5.29	4.93	5.63

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.14	0.81	0.14	0.81
	rise	0.13	1.06	0.13	1.06

Capacitance [fF]	
A	3.2730

Leakage [pW]	
	0.98

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	1391.36	1398.52	1641.66	1648.20
	rise	1345.64	1347.99	1568.95	1574.31

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	42
Cell Area	400.400 um ²
Equation	$Q = "A"$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	L
H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	6.09	6.76	7.10	7.77
	rise	6.13	6.83	6.48	7.18

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.14	0.81	0.14	0.81

Capacitance [fF]	
A	3.2730

Leakage [pW]	
	1.12

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	1797.99	1804.56	2047.61	2054.10

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	109.200 um ²
Equation	$Q = "!(B \& A) (C \& B)) (C \& A)"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	H
L	-	L	H
H	H	-	L
H	-	H	L
-	L	L	H
-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.09	0.53	-0.16
	rise	0.16	0.95	0.88
B to Q	fall	0.10	0.54	0.09
	rise	0.16	0.96	1.15
C to Q	fall	0.07	0.50	-0.12
	rise	0.11	0.90	0.96

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.10	0.70	0.74
	rise	0.18	1.37	0.70
B to Q	fall	0.11	0.70	0.73
	rise	0.19	1.37	0.73
C to Q	fall	0.08	0.68	0.65
	rise	0.19	1.38	0.68

Capacitance [fF]	
A	10.4390
B	9.6860
C	4.3640

Leakage [pW]	
	0.48

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	5.24	7.85	286.14
	rise	131.13	132.40	513.72
B to Q	fall	12.22	15.28	246.27
	rise	117.52	119.94	450.45
C to Q	fall	9.23	10.38	227.77
	rise	72.90	74.64	392.14

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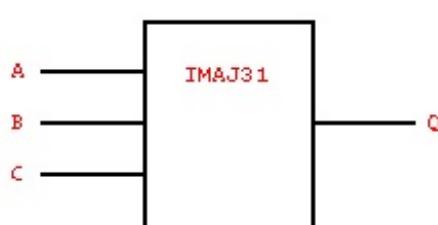
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	109.200 um ²
Equation	$Q = "!(B \& A) (C \& B)) (C \& A)"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	H
L	-	L	H
H	H	-	L
H	-	H	L
-	L	L	H
-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	0.08	0.51	-0.17
	rise	0.14	0.92	0.84
B to Q	fall	0.09	0.52	0.07
	rise	0.14	0.93	1.10
C to Q	fall	0.07	0.48	-0.14
	rise	0.10	0.88	0.93
				2.09

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	0.09	0.67	0.72
	rise	0.16	1.33	0.67
B to Q	fall	0.09	0.67	0.70
	rise	0.17	1.33	0.71
C to Q	fall	0.07	0.65	0.62
	rise	0.17	1.34	0.65
				1.77

Capacitance [fF]	
A	17.7660
B	16.1990
C	7.2940

Leakage [pW]	
	0.61

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	4.95	9.79	566.42
	rise	246.35	248.45	1021.28
B to Q	fall	19.25	25.01	483.50
	rise	218.39	223.86	892.24
C to Q	fall	12.77	15.29	446.51
	rise	135.12	139.42	776.59
				655.30

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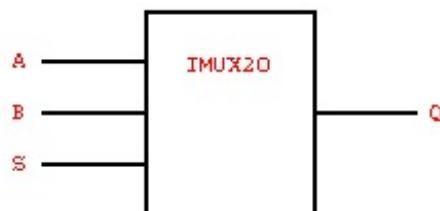
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	20
Cell Area	91.000 um ²
Equation	$Q = "!(A \& !S) (B \& S)"$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	H
H	-	L	L
-	L	H	H
-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.08	0.51	-0.19	0.66
	rise	0.13	0.92	0.84	1.82
B to Q	fall	0.08	0.51	-0.19	0.65
	rise	0.14	0.93	0.84	1.83
S to Q	fall	0.20	0.63	1.07	1.57
	rise	0.19	0.97	0.90	2.10

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.08	0.68	0.72	1.32
	rise	0.16	1.34	0.67	1.71
B to Q	fall	0.08	0.68	0.72	1.32
	rise	0.16	1.35	0.67	1.71
S to Q	fall	0.10	0.68	0.60	1.44
	rise	0.16	1.35	0.56	1.79

Capacitance [fF]	
A	5.1350
B	5.1540
S	8.1470

Leakage [pW]	
0.63	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	23.08	27.09	310.52	283.21
	rise	78.95	78.42	478.71	397.32
B to Q	fall	12.64	13.26	296.91	269.53
	rise	92.47	93.17	492.08	412.03
S to Q	fall	72.96	71.97	371.10	414.74
	rise	91.14	89.14	459.97	458.53

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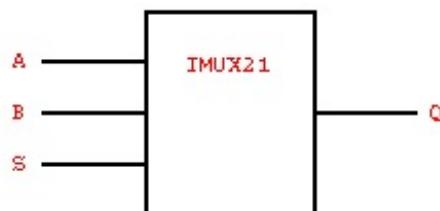
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	91.000 um ²
Equation	$Q = "!(A \& !S) (B \& S)"$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	H
H	-	L	L
-	L	H	H
-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.50	-0.21
	rise	0.12	0.90	0.81
B to Q	fall	0.07	0.49	-0.20
	rise	0.13	0.91	0.81
S to Q	fall	0.25	0.67	1.31
	rise	0.18	0.95	0.86

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.66	0.70
	rise	0.14	1.31	0.65
B to Q	fall	0.07	0.65	0.70
	rise	0.14	1.31	0.65
S to Q	fall	0.10	0.66	0.57
	rise	0.14	1.31	0.52

Capacitance [fF]	
A	8.7540
B	8.7340
S	10.6600

Leakage [pW]	
0.77	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	38.83	48.31	617.64
	rise	145.33	143.75	953.29
B to Q	fall	18.79	19.90	589.44
	rise	171.44	174.68	979.67
S to Q	fall	115.35	109.99	560.56
	rise	138.61	134.55	698.37

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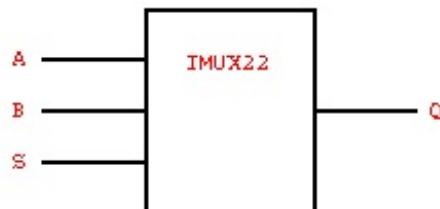
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	145.600 um ²
Equation	$Q = "!(A \& !S) (B \& S)"$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	H
H	-	L	L
-	L	H	H
-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.50	-0.22	0.63
	rise	0.11	0.89	0.79	1.78
B to Q	fall	0.07	0.48	-0.22	0.63
	rise	0.12	0.90	0.79	1.78
S to Q	fall	0.22	0.64	1.18	1.66
	rise	0.18	0.94	0.84	2.05

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.65	0.69	1.29
	rise	0.13	1.30	0.63	1.66
B to Q	fall	0.07	0.65	0.69	1.29
	rise	0.13	1.30	0.63	1.67
S to Q	fall	0.10	0.66	0.56	1.42
	rise	0.13	1.30	0.50	1.74

Capacitance [fF]	
A	17.4200
B	17.6040
S	19.3840

Leakage [pW]	
	1.37

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	54.90	73.61	1216.14	1114.03
	rise	286.69	285.25	1902.28	1581.27
B to Q	fall	14.44	16.53	1157.39	1058.38
	rise	339.03	344.17	1955.31	1641.10
S to Q	fall	194.61	183.94	1080.67	1157.86
	rise	263.10	253.91	1395.09	1331.58

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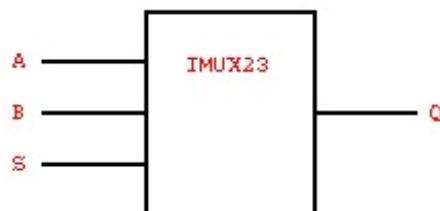
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	23
Cell Area	145.600 um ²
Equation	$Q = "!(A \& !S) (B \& S)"$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	H
H	-	L	L
-	L	H	H
-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.05	0.48	-0.18	0.90
	rise	0.11	0.90	0.91	2.10
B to Q	fall	0.08	0.51	0.09	1.04
	rise	0.13	0.93	0.63	1.71
S to Q	fall	0.19	0.62	0.98	1.44
	rise	0.19	0.99	0.82	1.81

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.06	0.65	0.62	1.40
	rise	0.13	1.32	0.54	1.74
B to Q	fall	0.09	0.68	0.78	1.45
	rise	0.16	1.36	0.70	1.74
S to Q	fall	0.07	0.68	0.69	1.29
	rise	0.14	1.34	0.63	1.68

Capacitance [fF]	
A	19.3430
B	22.0510
S	33.0690

Leakage [pW]	
1.53	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	10.99	21.66	1267.89	1216.57
	rise	322.42	333.03	2154.83	1825.86
B to Q	fall	78.55	83.60	1678.43	1420.72
	rise	492.16	506.42	2552.71	2165.21
S to Q	fall	319.25	340.08	1795.60	1836.58
	rise	452.01	457.01	2408.55	2185.53

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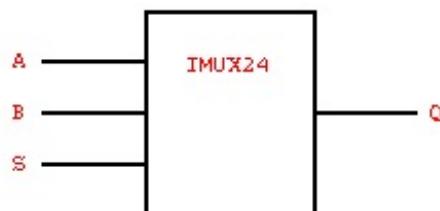
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	24
Cell Area	182.000 um ²
Equation	$Q = "!(A \& !S) (B \& S)"$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	H
H	-	L	L
-	L	H	H
-	H	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	0.06	0.47	-0.18
	rise	0.10	0.92	0.93
B to Q	fall	0.06	0.47	-0.18
	rise	0.10	0.92	0.93
S to Q	fall	0.19	0.61	0.99
	rise	0.20	1.02	0.81

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	0.06	0.63	0.61
	rise	0.15	1.37	0.62
B to Q	fall	0.06	0.63	0.61
	rise	0.15	1.37	0.62
S to Q	fall	0.09	0.63	0.68
	rise	0.13	1.35	0.62

Capacitance [fF]	
A	23.7110
B	23.6810
S	42.4500

Leakage [pW]	
1.69	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	35.24	46.74	1623.33
	rise	464.47	482.08	2876.06
B to Q	fall	35.11	44.60	1619.94
	rise	466.58	487.73	2883.13
S to Q	fall	456.39	508.64	2413.60
	rise	655.73	681.10	3336.54

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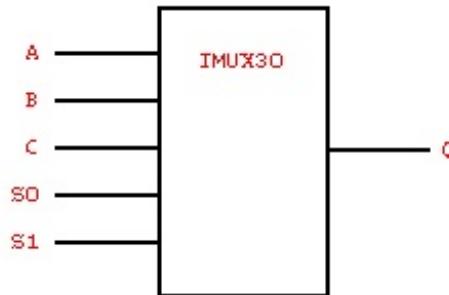
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	182.000 um ²
Equation	$Q = "!(\((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1)"$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	H
H	-	-	L	L	L
-	L	-	H	L	H
-	H	-	H	L	L
-	-	L	-	H	H
-	-	H	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.15	0.51	-0.05	0.61
	rise	0.21	0.79	0.97	1.69
B to Q	fall	0.14	0.50	-0.05	0.61
	rise	0.22	0.80	0.97	1.69
C to Q	fall	0.08	0.51	-0.19	0.66
	rise	0.14	0.93	0.85	1.83
S0 to Q	fall	0.31	0.68	1.27	1.66
	rise	0.29	0.86	1.08	1.91
S1 to Q	fall	0.23	0.55	1.45	1.82
	rise	0.22	1.00	1.02	1.93

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.13	0.64	0.78	1.15
	rise	0.30	1.39	0.84	1.76
B to Q	fall	0.12	0.64	0.78	1.14
	rise	0.31	1.39	0.84	1.76
C to Q	fall	0.09	0.68	0.73	1.32
	rise	0.16	1.35	0.68	1.72
S0 to Q	fall	0.15	0.64	0.71	1.22
	rise	0.31	1.39	0.76	1.79
S1 to Q	fall	0.27	0.68	0.60	1.47
	rise	0.17	1.35	0.58	1.59

Capacitance [fF]	
A	6.9370
B	6.9700
C	5.1020
S0	9.2760
S1	6.9950

Leakage [pW]	
	1.24

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	89.36	99.87	535.56	570.93
	rise	181.27	181.61	786.27	709.60
B to Q	fall	70.30	77.85	515.36	549.81
	rise	203.35	204.70	806.78	732.06
C to Q	fall	12.58	13.08	297.30	269.21
	rise	95.51	96.70	494.89	414.95
S0 to Q	fall	149.21	156.83	510.07	556.50
	rise	185.77	183.55	628.80	606.97
S1 to Q	fall	89.00	81.80	429.89	427.09
	rise	89.11	90.60	373.03	352.15

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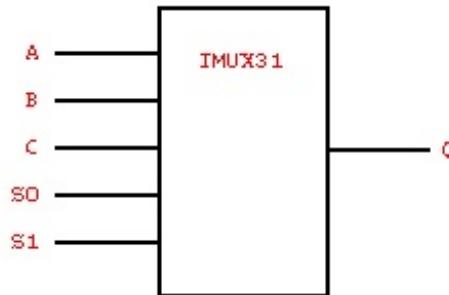
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	218.400 um ²
Equation	$Q = "!(\((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1)"$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	H
H	-	-	L	L	L
-	L	-	H	L	H
-	H	-	H	L	L
-	-	L	-	H	H
-	-	H	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.14	0.50	-0.07	0.60
	rise	0.19	0.77	0.95	1.67
B to Q	fall	0.13	0.49	-0.07	0.60
	rise	0.20	0.78	0.95	1.67
C to Q	fall	0.07	0.49	-0.20	0.64
	rise	0.13	0.91	0.81	1.79
S0 to Q	fall	0.30	0.66	1.18	1.58
	rise	0.29	0.85	1.05	1.90
S1 to Q	fall	0.20	0.51	1.21	1.58
	rise	0.23	1.00	0.96	1.71

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.12	0.63	0.77	1.14
	rise	0.28	1.36	0.82	1.74
B to Q	fall	0.12	0.63	0.77	1.14
	rise	0.28	1.36	0.82	1.74
C to Q	fall	0.07	0.65	0.70	1.29
	rise	0.14	1.31	0.65	1.68
S0 to Q	fall	0.14	0.63	0.69	1.20
	rise	0.29	1.36	0.74	1.78
S1 to Q	fall	0.24	0.65	0.55	1.41
	rise	0.15	1.31	0.53	1.55

Capacitance [fF]	
A	13.7320
B	13.8390
C	8.7420
S0	15.0720
S1	10.6620

Leakage [pW]	
	1.89

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	170.42	192.44	1062.10	1135.93
	rise	331.22	332.87	1543.49	1391.23
B to Q	fall	133.22	148.52	1022.09	1094.01
	rise	374.74	378.55	1583.98	1436.37
C to Q	fall	19.54	19.52	589.59	539.27
	rise	171.92	174.48	980.50	821.68
S0 to Q	fall	276.65	291.55	950.60	1045.75
	rise	326.48	321.90	1170.34	1124.13
S1 to Q	fall	142.42	123.78	718.75	721.12
	rise	135.14	133.73	661.47	601.65

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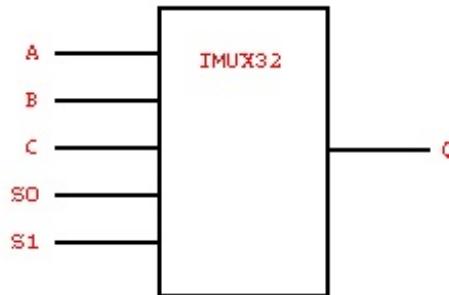
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	236.600 μm^2
Equation	$Q = "!((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1)"$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	H
H	-	-	L	L	L
-	L	-	H	L	H
-	H	-	H	L	L
-	-	L	-	H	H
-	-	H	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.13	0.48	0.02	0.82
	rise	0.19	0.77	1.10	1.93
B to Q	fall	0.16	0.53	0.29	1.02
	rise	0.21	0.80	0.78	1.56
C to Q	fall	0.05	0.43	-0.28	0.78
	rise	0.09	0.88	0.93	2.12
S0 to Q	fall	0.26	0.62	1.07	1.45
	rise	0.27	0.86	0.93	1.65
S1 to Q	fall	0.19	0.51	1.06	1.42
	rise	0.23	1.02	1.18	1.69

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.12	0.64	0.74	1.21
	rise	0.31	1.42	0.80	1.82
B to Q	fall	0.14	0.66	0.88	1.26
	rise	0.34	1.47	0.93	1.86
C to Q	fall	0.05	0.58	0.55	1.33
	rise	0.12	1.30	0.51	1.71
S0 to Q	fall	0.13	0.66	0.80	1.16
	rise	0.32	1.44	0.86	1.80
S1 to Q	fall	0.23	0.66	0.72	1.18
	rise	0.18	1.39	0.57	1.63

Capacitance [fF]	
A	19.6230
B	21.9250
C	11.5040
S0	32.3670
S1	18.9110

Leakage [pW]	
	2.51

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	231.04	257.04	1599.02	1720.31
	rise	577.02	581.49	2452.70	2213.32
B to Q	fall	298.98	322.89	1966.71	1942.07
	rise	752.42	760.60	2794.40	2550.90
C to Q	fall	25.12	26.21	840.74	847.14
	rise	208.75	217.95	1487.85	1258.71
S0 to Q	fall	554.46	584.41	2079.59	2276.08
	rise	709.22	712.62	2647.65	2511.26
S1 to Q	fall	289.82	274.04	1581.41	1445.42
	rise	309.64	322.62	1475.57	1337.70

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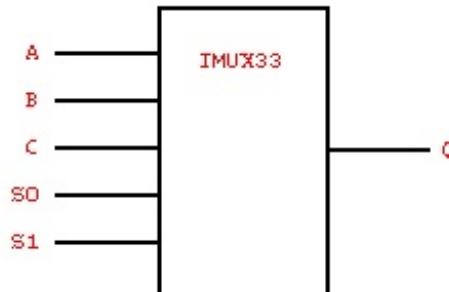
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	33
Cell Area	364.000 um ²
Equation	$Q = "!(\((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1)"$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	H
H	-	-	L	L	L
-	L	-	H	L	H
-	H	-	H	L	L
-	-	L	-	H	H
-	-	H	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.13	0.47	-0.14	0.53
	rise	0.19	0.80	0.97	1.71
B to Q	fall	0.12	0.45	-0.14	0.53
	rise	0.20	0.81	0.97	1.72
C to Q	fall	0.07	0.48	-0.21	0.64
	rise	0.12	0.90	0.79	1.78
S0 to Q	fall	0.24	0.59	1.05	1.43
	rise	0.26	0.86	1.08	1.96
S1 to Q	fall	0.16	0.46	0.98	1.34
	rise	0.22	0.98	0.93	1.54

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.10	0.59	0.74	1.10
	rise	0.28	1.40	0.78	1.74
B to Q	fall	0.10	0.58	0.75	1.10
	rise	0.27	1.40	0.78	1.75
C to Q	fall	0.07	0.64	0.69	1.28
	rise	0.13	1.30	0.63	1.66
S0 to Q	fall	0.12	0.59	0.66	1.16
	rise	0.27	1.40	0.71	1.80
S1 to Q	fall	0.20	0.64	0.56	1.39
	rise	0.14	1.36	0.52	1.62

Capacitance [fF]	
A	35.7170
B	35.4560
C	24.8070
S0	35.6790
S1	25.8210

Leakage [pW]	
3.24	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	501.39	565.82	3014.19	3304.29
	rise	884.21	890.68	4473.03	4014.60
B to Q	fall	381.25	426.69	2881.43	3171.47
	rise	1024.52	1036.10	4602.19	4156.07
C to Q	fall	40.45	40.81	1735.54	1593.17
	rise	498.04	510.84	2911.48	2441.51
S0 to Q	fall	741.18	788.39	2660.86	3016.40
	rise	823.91	812.44	3314.15	3192.78
S1 to Q	fall	346.79	306.17	2024.11	2068.97
	rise	375.63	366.49	2003.98	1845.12

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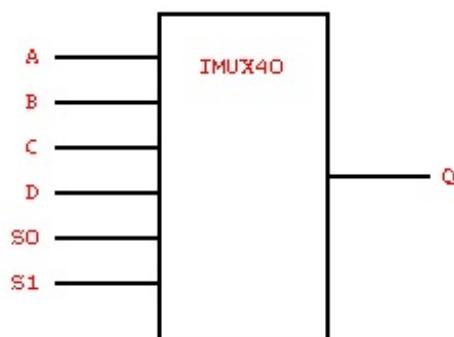
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	40
Cell Area	218.400 um ²
Equation	$Q = "!((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0)"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table						
A	B	C	D	S0	S1	Q
L	-	-	-	L	L	H
H	-	-	-	L	L	L
-	L	-	-	H	L	H
-	H	-	-	H	L	L
-	-	L	-	L	H	H
-	-	-	H	-	L	H
-	-	-	-	L	H	H
-	-	-	-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.14	0.50	-0.06	0.61
	rise	0.21	0.79	0.97	1.68
B to Q	fall	0.14	0.49	-0.06	0.61
	rise	0.21	0.79	0.97	1.68
C to Q	fall	0.14	0.49	-0.05	0.61
	rise	0.21	0.79	0.97	1.69
D to Q	fall	0.14	0.49	-0.05	0.61
	rise	0.22	0.80	0.97	1.69
S0 to Q	fall	0.32	0.68	1.22	1.62
	rise	0.31	0.89	1.08	1.92
S1 to Q	fall	0.14	0.46	1.02	1.39
	rise	0.10	0.63	1.08	1.64

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.12	0.63	0.77	1.14
	rise	0.30	1.39	0.83	1.76
B to Q	fall	0.12	0.63	0.78	1.14
	rise	0.30	1.39	0.83	1.76
C to Q	fall	0.13	0.63	0.78	1.14
	rise	0.30	1.40	0.83	1.77
D to Q	fall	0.13	0.63	0.78	1.14
	rise	0.30	1.40	0.83	1.77
S0 to Q	fall	0.16	0.64	0.71	1.21
	rise	0.31	1.41	0.76	1.81
S1 to Q	fall	0.17	0.63	0.59	1.25
	rise	0.25	1.40	0.55	1.61

Capacitance [fF]	
A	7.0080
B	6.9250
C	6.9180
D	6.9270
S0	17.3570
S1	7.4820

Leakage [pW]	
	1.73

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	90.67	99.42	534.59	570.87
	rise	175.00	175.97	780.08	704.18
B to Q	fall	71.91	77.58	514.81	549.50
	rise	196.60	198.91	800.84	726.67
C to Q	fall	80.23	85.00	519.74	554.84
	rise	197.10	198.85	802.52	726.19
D to Q	fall	62.14	63.15	500.05	533.52
	rise	218.74	221.79	823.00	748.97
S0 to Q	fall	222.75	234.72	814.83	918.21
	rise	275.07	275.00	979.52	986.03
S1 to Q	fall	68.91	64.61	404.64	443.09
	rise	99.15	87.44	554.91	522.02

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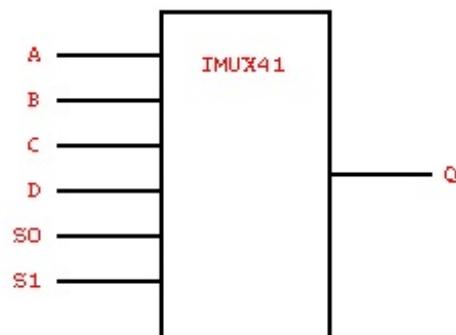
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	254.800 um ²
Equation	$Q = "!((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0)"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table							
A	B	C	D	S0	S1	Q	
L	-	-	-	L	L	H	
H	-	-	-	L	L	L	
-	L	-	-	H	L	H	
-	H	-	-	H	L	L	
-	-	L	-	L	H	H	
-	-	H	-	L	H	L	
-	-	-	L	H	H	H	
-	-	-	H	H	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.14	0.48	-0.06	0.60
	rise	0.19	0.76	0.93	1.65
B to Q	fall	0.13	0.48	-0.07	0.60
	rise	0.20	0.77	0.94	1.66
C to Q	fall	0.13	0.47	-0.06	0.60
	rise	0.20	0.77	0.93	1.65
D to Q	fall	0.12	0.46	-0.10	0.57
	rise	0.21	0.80	0.98	1.70
S0 to Q	fall	0.28	0.64	1.13	1.53
	rise	0.28	0.87	1.04	1.88
S1 to Q	fall	0.14	0.45	0.93	1.30
	rise	0.10	0.62	1.00	1.55

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.11	0.62	0.76	1.12
	rise	0.28	1.36	0.80	1.73
B to Q	fall	0.11	0.62	0.76	1.12
	rise	0.28	1.36	0.80	1.73
C to Q	fall	0.12	0.61	0.76	1.12
	rise	0.27	1.36	0.79	1.73
D to Q	fall	0.11	0.61	0.76	1.12
	rise	0.28	1.40	0.79	1.75
S0 to Q	fall	0.14	0.62	0.69	1.20
	rise	0.29	1.40	0.73	1.77
S1 to Q	fall	0.17	0.61	0.61	1.24
	rise	0.25	1.40	0.56	1.61

Capacitance [fF]	
A	12.3790
B	12.5080
C	12.4940
D	12.3540
S0	29.8160
S1	11.3560

Leakage [pW]	
	2.26

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	178.51	196.38	1058.75	1134.94
	rise	322.91	324.66	1527.40	1377.47
B to Q	fall	151.47	161.64	1023.79	1101.24
	rise	366.96	371.73	1570.78	1423.97
C to Q	fall	129.41	137.99	1007.28	1081.46
	rise	380.49	383.45	1587.50	1440.41
D to Q	fall	91.89	93.72	935.70	1014.99
	rise	419.03	424.38	1606.28	1459.35
S0 to Q	fall	393.43	413.29	1581.28	1806.18
	rise	489.18	488.48	1906.81	1937.23
S1 to Q	fall	119.53	108.79	756.30	810.34
	rise	186.30	159.63	1074.31	1004.91

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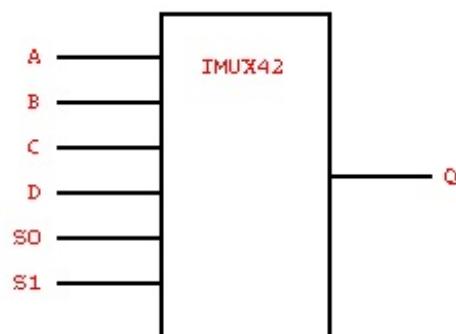
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	42
Cell Area	364.000 um ²
Equation	$Q = "!((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0)"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table						
A	B	C	D	S0	S1	Q
L	-	-	-	L	L	H
H	-	-	-	L	L	L
-	L	-	-	H	L	H
-	H	-	-	H	L	L
-	-	L	-	L	H	H
-	-	-	H	-	L	H
-	-	-	-	L	H	H
-	-	-	-	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.12	0.47	-0.02	0.80
	rise	0.18	0.78	1.11	1.97
B to Q	fall	0.11	0.45	-0.06	0.74
	rise	0.17	0.77	1.12	1.97
C to Q	fall	0.12	0.49	0.06	0.89
	rise	0.18	0.76	1.03	1.89
D to Q	fall	0.11	0.44	-0.06	0.74
	rise	0.18	0.77	1.12	1.97
S0 to Q	fall	0.26	0.63	1.07	1.47
	rise	0.28	0.88	0.98	1.72
S1 to Q	fall	0.12	0.44	0.86	1.24
	rise	0.09	0.65	0.95	1.53

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.10	0.63	0.71	1.21
	rise	0.29	1.43	0.79	1.82
B to Q	fall	0.10	0.60	0.69	1.17
	rise	0.29	1.42	0.77	1.80
C to Q	fall	0.11	0.65	0.72	1.23
	rise	0.28	1.41	0.80	1.83
D to Q	fall	0.10	0.58	0.69	1.16
	rise	0.29	1.44	0.77	1.82
S0 to Q	fall	0.13	0.64	0.74	1.10
	rise	0.27	1.41	0.77	1.74
S1 to Q	fall	0.15	0.64	0.60	1.27
	rise	0.24	1.43	0.60	1.69

Capacitance [fF]	
A	18.1300
B	18.2990
C	18.3370
D	18.3150
S0	67.4520
S1	20.8830

Leakage [pW]	
	3.82

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	244.15	265.28	1534.82	1652.32
	rise	557.66	565.24	2388.80	2150.53
B to Q	fall	238.40	257.97	1531.22	1685.83
	rise	557.97	567.56	2440.62	2203.27
C to Q	fall	139.98	145.89	1468.73	1549.31
	rise	679.80	690.47	2494.35	2264.73
D to Q	fall	140.35	142.61	1425.87	1577.18
	rise	673.18	684.27	2552.25	2317.13
S0 to Q	fall	985.23	1047.84	4131.58	4907.30
	rise	1244.97	1255.18	5240.30	5302.08
S1 to Q	fall	224.07	203.66	1457.11	1593.21
	rise	313.86	267.85	2093.67	1963.64

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Cell Area	36.400 um ²
Equation	$Q = \text{!A}$
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.05	0.53	-0.20	1.07
	rise	0.08	0.94	0.86	2.24

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.05	0.71	0.56	1.48
	rise	0.10	1.39	0.54	1.87

Capacitance [fF]	
A	3.8210

Leakage [pW]	
	0.21

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	5.98	6.28	160.14	131.01
	rise	34.83	35.09	256.12	205.46

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	10
Cell Area	91.000 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.03	0.53	-0.20
	rise	0.05	0.85	0.66
				2.06

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.03	0.70	0.49
	rise	0.06	1.27	0.46
				1.47
				1.78

Capacitance [fF]	
A	41.5030

Leakage [pW]	
	1.54

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		50.00	1600.00	50.00
A to Q	fall	0.00	0.00	3041.25
	rise	404.34	422.91	4862.94
				3928.44

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	12
Cell Area	91.000 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00 1920.00
A to Q	fall	0.03	0.53	-0.20 1.12
	rise	0.05	0.84	0.66 2.06

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00 1920.00
A to Q	fall	0.03	0.70	0.49 1.46
	rise	0.06	1.27	0.45 1.77

Capacitance [fF]	
A	49.0960

Leakage [pW]	
	1.69

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		60.00	1920.00	60.00 1920.00
A to Q	fall	0.00	0.00	3637.81 3059.90
	rise	472.43	491.35	5830.49 4709.08

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	15
Cell Area	109.200 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		75.00	2400.00	75.00 2400.00
A to Q	fall	0.03	0.53	-0.19 1.12
	rise	0.05	0.84	0.66 2.06

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		75.00	2400.00	75.00 2400.00
A to Q	fall	0.03	0.70	0.49 1.46
	rise	0.06	1.27	0.46 1.77

Capacitance [fF]	
A	61.1940

Leakage [pW]	
	2.12

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		75.00	2400.00	75.00 2400.00
A to Q	fall	0.00	0.00	4580.57 3845.70
	rise	613.91	634.02	7310.24 5908.14

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.04	0.56	-0.15	1.16
	rise	0.06	0.88	0.73	2.11

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.04	0.74	0.54	1.51
	rise	0.08	1.32	0.52	1.82

Capacitance [fF]	
A	5.4320

Leakage [pW]	
	0.28

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	6.45	7.04	321.35	261.97
	rise	53.87	55.06	496.22	399.74

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.04	0.54	-0.17	1.14
	rise	0.05	0.86	0.69	2.08

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.04	0.72	0.52	1.48

Capacitance [fF]	
A	8.7950

Leakage [pW]	
	0.37

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	3.05	4.52	634.79	525.68
	rise	95.87	98.31	988.54	798.48

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	3
Cell Area	36.400 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.04	0.53	-0.18	1.13
	rise	0.05	0.85	0.68	2.07

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.04	0.70	0.51	1.47
	rise	0.07	1.27	0.47	1.78

Capacitance [fF]	
A	12.4750

Leakage [pW]	
	0.45

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.00	0.00	936.06	781.91
	rise	134.51	138.33	1474.47	1191.44

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	4
Cell Area	54.600 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.03	0.54	-0.19	1.13
	rise	0.05	0.85	0.66	2.07

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.03	0.71	0.49	1.48
	rise	0.06	1.28	0.46	1.78

Capacitance [fF]	
A	17.1800

Leakage [pW]	
	0.71

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.00	0.00	1221.71	1021.34
	rise	164.13	168.03	1945.89	1571.97

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	6
Cell Area	54.600 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.03	0.53	-0.20	1.12
	rise	0.05	0.84	0.65	2.06

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.03	0.70	0.48	1.46
	rise	0.06	1.26	0.45	1.77

Capacitance [fF]	
A	24.5860

Leakage [pW]	
	0.86

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.00	0.00	1804.63	1518.65
	rise	238.24	248.04	2912.76	2355.77

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	8
Cell Area	72.800 um ²
Equation	Q = "!"A"
Type	Combinational
Input	A
Output	Q



State Table	
A	Q
L	H
H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.04	0.53	-0.18	1.13
	rise	0.05	0.84	0.67	2.06

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.03	0.70	0.50	1.47
	rise	0.06	1.26	0.47	1.77

Capacitance [fF]	
A	33.1160

Leakage [pW]	
	1.21

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		40.00	1280.00	40.00	1280.00
A to Q	fall	0.00	0.00	2484.73	2081.34
	rise	343.82	349.98	3930.28	3181.96

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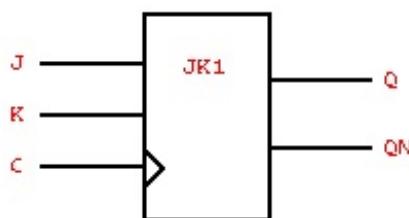
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	345.800 um ²
Equation	$Q = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))$ $QN = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))$
Clock	C
Type	Sequential
Input	J, K
Output	Q, QN



State Table						
C	J	K	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	-	L	H
R	H	L	-	-	H	L
R	H	H	L	H	H	L
R	H	H	H	L	L	H
F	H	L	L	H	L	H
F	H	L	H	L	H	L
F	-	H	L	H	L	H
F	-	H	H	L	H	L
-	L	L	L	H	L	H
-	L	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.56	1.11	0.73	1.29
	rise	0.51	1.34	0.73	1.55
C to QN	fall	0.62	1.16	0.83	1.37
	rise	0.68	1.50	0.85	1.67

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32

Constraints Time [ns]		
Setup C to J	fall	0.94
	rise	0.69
Hold C to J	fall	0.18
	rise	0.72
Setup C to K	fall	1.16
	rise	0.47
Hold C to K	fall	0.45
	rise	0.50

Capacitance [fF]	
C	3.7030
J	5.0210
K	4.8680

Leakage [pW]	
2.95	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	294.49	296.96	429.46	441.99
	rise	240.52	248.66	380.27	399.81
C to QN	fall	240.52	248.66	380.27	399.81
	rise	294.49	296.96	429.46	441.99

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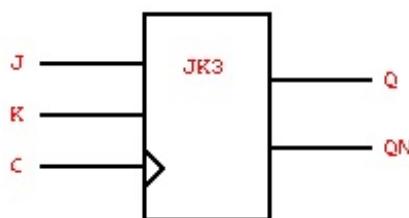
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3
Strength	3
Cell Area	345.800 um ²
Equation	$Q = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))$ $QN = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))$
Clock	C
Type	Sequential
Input	J, K
Output	Q, QN



State Table						
C	J	K	IQ _(int)	IQN _(int)	Q	QN
R	L	H	-	-	L	H
R	H	L	-	-	H	L
R	H	H	L	H	H	L
R	H	H	H	L	L	H
F	H	L	L	H	L	H
F	H	L	H	L	H	L
F	-	H	L	H	L	H
F	-	H	H	L	H	L
-	L	L	L	H	L	H
-	L	L	H	L	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.59	1.15	0.77	1.32
	rise	0.54	1.35	0.75	1.56
C to QN	fall	0.70	1.24	0.92	1.45
	rise	0.77	1.56	0.95	1.74

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to J	fall	0.94
	rise	0.69
Hold C to J	fall	0.18
	rise	0.72
Setup C to K	fall	1.16
	rise	0.47
Hold C to K	fall	0.45
	rise	0.50

Capacitance [fF]	
C	3.6970
J	5.0210
K	4.8630

Leakage [pW]	
3.26	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	409.29	389.54	546.13	534.66
	rise	351.33	344.94	493.86	496.85
C to QN	fall	351.33	344.94	493.86	496.85
	rise	409.29	389.54	546.13	534.66

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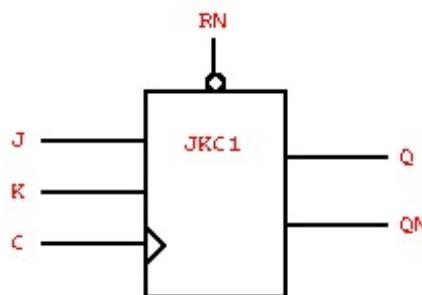
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	364.000 um ²
Equation	$Q = "(!(!RN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$ $QN = "((!RN)+!((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$
Clock	C
Reset	RN
Type	Sequential
Input	J, K
Output	Q, QN



State Table								
C	J	K	RN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	L	H	-	-	H	L	
R	H	H	H	L	H	H	L	
R	H	H	H	H	H	L	L	H
F	H	L	H	L	H	L	L	H
F	H	L	H	H	L	H	L	
F	-	H	H	L	H	L	L	H
F	-	H	H	H	L	H	L	
-	L	L	H	L	H	L	H	
-	L	L	H	H	L	H	L	
-	-	-	L	-	-	L	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.61	1.17	0.79	1.35
	rise	0.48	1.31	0.70	1.53
C to QN	fall	0.59	1.13	0.81	1.35
	rise	0.73	1.55	0.91	1.73
RN to Q	fall	0.21	0.77	1.23	1.83
RN to QN	rise	0.39	1.22	1.46	2.27

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.74	0.15	0.75
RN to QN	rise	0.11	1.32	0.11	1.32

Constraints Time [ns]		
Setup C to J	fall	0.97
	rise	0.72
Hold C to J	fall	0.18
	rise	0.73
Setup C to K	fall	1.16
	rise	0.49
Hold C to K	fall	0.43
	rise	0.50
Recovery C to RN	rise	1.28
Removal C to RN	rise	1.27

Capacitance [fF]	
C	3.6990
J	5.0800
K	4.8700
RN	11.2570

Leakage [pW]	
2.99	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	320.99	323.33	457.25	467.88
	rise	245.53	257.27	384.86	408.83
C to QN	fall	245.53	257.27	384.86	408.83
	rise	320.99	323.33	457.25	467.88
RN to Q	fall	281.11	290.11	884.83	886.58
RN to QN	rise	281.11	290.11	884.83	886.58

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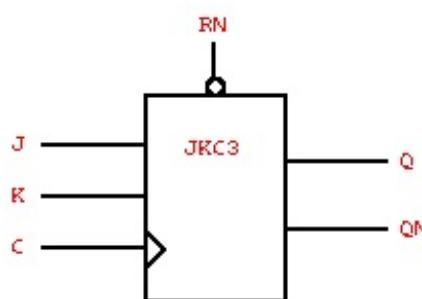
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	364.000 um ²
Equation	$Q = "(!(!RN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$ $QN = "((!RN)+!((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$
Clock	C
Reset	RN
Type	Sequential
Input	J, K
Output	Q, QN



State Table								
C	J	K	RN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	L	H	-	-	H	L	
R	H	H	H	L	H	H	L	
R	H	H	H	H	H	L	L	H
F	H	L	H	L	H	L	L	H
F	H	L	H	H	L	H	L	L
F	-	H	H	L	H	L	L	H
F	-	H	H	H	L	H	L	L
-	L	L	H	L	H	L	H	L
-	L	L	H	H	L	H	L	L
-	-	-	L	-	-	L	H	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.64	1.21	0.82
	rise	0.50	1.31	0.72
C to QN	fall	0.67	1.20	0.88
	rise	0.83	1.62	1.01
RN to Q	fall	0.25	0.80	1.31
RN to QN	rise	0.49	1.29	1.62

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.09	0.72	0.09
	rise	0.09	1.28	0.09
C to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.09
RN to Q	fall	0.08	0.71	0.16
RN to QN	rise	0.10	1.28	0.11

Constraints Time [ns]		
Setup C to J	fall	0.97
	rise	0.72
Hold C to J	fall	0.18
	rise	0.73
Setup C to K	fall	1.15
	rise	0.49
Hold C to K	fall	0.43
	rise	0.50
Recovery C to RN	rise	1.58
Removal C to RN	rise	1.27

Capacitance [fF]	
C	3.6990
J	5.0780
K	4.8630
RN	11.2610

Leakage [pW]	
3.31	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	440.36	416.91	577.79
	rise	352.61	351.99	494.37
C to QN	fall	352.61	351.99	494.37
	rise	440.36	416.91	577.79
RN to Q	fall	399.81	381.95	1066.65
RN to QN	rise	399.81	381.95	1066.65
				990.06
				990.06

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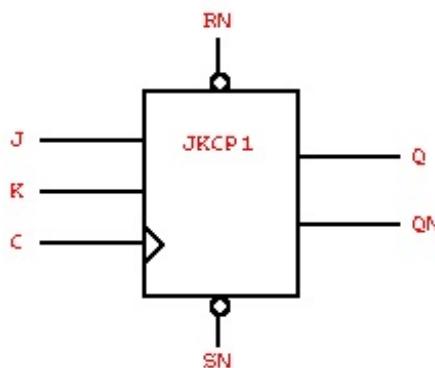
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	382.200 um ²
Equation	$Q = "(!(!RN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))+ (!SN))"$ $QN = "(!(!SN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))+ (!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	J, K
Output	Q, QN



State Table									
C	J	K	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	H	-	-	L	H	
R	H	L	H	H	-	-	H	L	
R	H	H	H	L	H	H	H	L	
R	H	H	H	H	H	H	L	L	H
F	H	L	H	H	L	H	L	H	H
F	H	L	H	H	H	H	L	H	L
F	-	H	H	H	L	H	L	H	H
F	-	H	H	H	H	H	L	H	L
-	L	L	H	H	L	H	L	H	
-	L	L	H	H	H	L	H	L	
-	-	-	L	L	-	-	L	L	
-	-	-	L	H	-	-	L	H	
-	-	-	H	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.62	1.19	0.81	1.38
	rise	0.50	1.33	0.72	1.55
C to QN	fall	0.64	1.19	0.86	1.41
	rise	0.71	1.53	0.89	1.71
RN to Q	fall	0.22	0.77	1.25	1.82
RN to QN	rise	0.35	1.18	1.38	2.20
SN to Q	rise	0.41	1.24	1.46	2.28
SN to QN	fall	0.25	0.82	1.31	1.89

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.09	0.75	0.09	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.74	0.15	0.75
RN to QN	rise	0.10	1.32	0.11	1.32
SN to Q	rise	0.10	1.32	0.10	1.32
SN to QN	fall	0.09	0.75	0.16	0.75

Constraints		Time [ns]
Setup C to J	fall	0.91
	rise	0.83
Hold C to J	fall	0.22
	rise	0.68
Setup C to K	fall	1.21
	rise	0.44
Hold C to K	fall	0.47
	rise	0.48
Recovery C to RN	rise	1.31
Removal C to RN	rise	1.23
Recovery C to SN	rise	0.88
Removal C to SN	rise	0.53

Capacitance [fF]	
C	3.7000
J	5.0790
K	4.8720
RN	11.7290
SN	10.5310

Leakage [pW]	
	3.15

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	325.56	333.11	460.93	477.39
	rise	281.33	293.53	421.97	444.83
C to QN	fall	281.33	293.53	421.97	444.83
	rise	325.56	333.11	460.93	477.39
RN to Q	fall	291.36	302.75	890.45	901.46
RN to QN	rise	291.36	302.75	890.45	901.46
SN to Q	rise	315.23	317.45	928.35	929.34
SN to QN	fall	315.23	317.45	928.35	929.34

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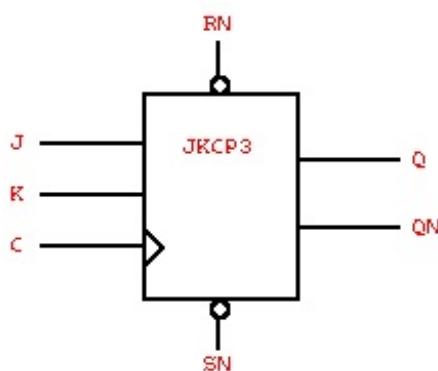
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	382.200 um ²
Equation	$Q = "(!(!RN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) + (!SN))"$ $QN = "(!(!SN)*((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) + (!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	J, K
Output	Q, QN



State Table									
C	J	K	RN	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	H	-	-	L	H	
R	H	L	H	H	-	-	H	L	
R	H	H	H	L	H	H	H	L	
R	H	H	H	H	H	L	L	H	
F	H	L	H	H	L	H	L	H	
F	H	L	H	H	H	L	H	L	
F	-	H	H	H	L	H	L	H	
-	L	L	H	H	L	H	L	H	
-	L	L	H	H	H	L	H	L	
-	-	-	L	L	-	-	L	L	
-	-	-	L	H	-	-	L	H	
-	-	-	H	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.66	1.23	0.84	1.41
	rise	0.52	1.33	0.74	1.55
C to QN	fall	0.72	1.26	0.94	1.48
	rise	0.78	1.57	0.96	1.76
RN to Q	fall	0.26	0.80	1.33	1.91
RN to QN	rise	0.42	1.23	1.51	2.29
SN to Q	rise	0.48	1.28	1.58	2.37
SN to QN	fall	0.29	0.85	1.40	1.97

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.08	0.71	0.16	0.71
RN to QN	rise	0.10	1.28	0.10	1.28
SN to Q	rise	0.09	1.28	0.10	1.28
SN to QN	fall	0.09	0.72	0.17	0.72

Constraints		Time [ns]
Setup C to J	fall	0.91
	rise	0.83
Hold C to J	fall	0.22
	rise	0.68
Setup C to K	fall	1.21
	rise	0.44
Hold C to K	fall	0.47
	rise	0.48
Recovery C to RN	rise	1.60
Removal C to RN	rise	1.23
Recovery C to SN	rise	0.95
Removal C to SN	rise	0.53

Capacitance [fF]	
C	3.7020
J	5.0790
K	4.8630
RN	11.7600
SN	10.5720

Leakage [pW]	
	3.45

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	440.40	427.34	577.42	571.60
	rise	392.10	389.18	534.80	541.04
C to QN	fall	392.10	389.18	534.80	541.04
	rise	440.40	427.34	577.42	571.60
RN to Q	fall	407.05	396.48	1061.52	1001.63
RN to QN	rise	407.05	396.48	1061.52	1001.63
SN to Q	rise	425.21	406.64	1102.06	1032.00
SN to QN	fall	425.21	406.64	1102.06	1032.00

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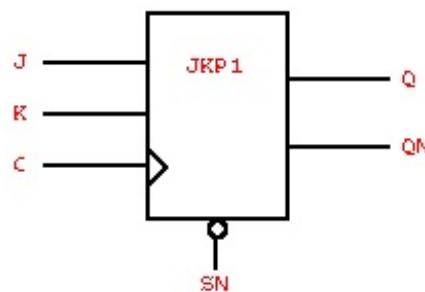
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	364.000 um ²
Equation	$Q = "((!(SN)+((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$ $QN = "((!(SN)+((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$
Clock	C
Set	SN
Type	Sequential
Input	J, K
Output	Q, QN



State Table								
C	J	K	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	L	H	-	-	H	L	
R	H	H	H	L	H	H	L	
R	H	H	H	H	H	L	L	H
F	H	L	H	L	H	L	L	H
F	H	L	H	H	L	H	L	
F	-	H	H	L	H	L	L	H
F	-	H	H	H	L	H	L	
-	L	L	H	L	H	L	H	
-	L	L	H	H	L	H	L	
-	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.57	1.13	0.75	1.31
	rise	0.52	1.35	0.74	1.57
C to QN	fall	0.66	1.21	0.88	1.43
	rise	0.65	1.47	0.84	1.65
SN to Q	rise	0.46	1.28	1.54	2.36
SN to QN	fall	0.24	0.81	1.29	1.90

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
SN to Q	rise	0.10	1.32	0.11	1.32
SN to QN	fall	0.08	0.75	0.16	0.76

Constraints Time [ns]		
Setup C to J	fall	0.88
	rise	0.80
Hold C to J	fall	0.22
	rise	0.68
Setup C to K	fall	1.21
	rise	0.42
Hold C to K	fall	0.49
	rise	0.48
Recovery C to SN	rise	0.96
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6710
J	4.9790
K	4.8700
SN	10.7210

Leakage [pW]	
2.92	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	295.09	302.42	429.16	446.86
	rise	275.65	284.09	416.60	435.50
C to QN	fall	275.65	284.09	416.60	435.50
	rise	295.09	302.42	429.16	446.86
SN to Q	rise	301.36	299.39	915.84	906.52
SN to QN	fall	301.36	299.39	915.84	906.52

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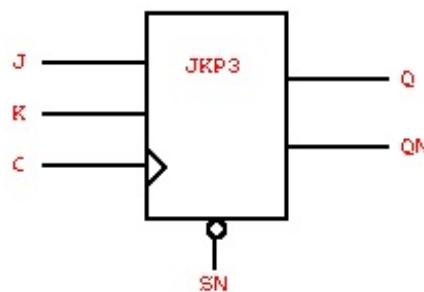
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	364.000 um ²
Equation	$Q = "((!(SN)+((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$ $QN = "((!(SN)+((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))))"$
Clock	C
Set	SN
Type	Sequential
Input	J, K
Output	Q, QN



State Table								
C	J	K	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	-	L	H	
R	H	L	H	-	-	H	L	
R	H	H	H	L	H	H	L	
R	H	H	H	H	L	L	H	
F	H	L	H	L	H	L	H	
F	H	L	H	H	L	H	L	
F	-	H	H	L	H	L	H	
F	-	H	H	H	L	H	L	
-	L	L	H	L	H	L	H	
-	L	L	H	H	L	H	L	
-	-	-	L	-	-	H	L	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.60	1.17	0.79
	rise	0.55	1.36	0.77
C to QN	fall	0.75	1.29	0.97
	rise	0.72	1.52	0.91
SN to Q	rise	0.55	1.35	1.70
SN to QN	fall	0.28	0.84	1.38
				1.99

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.72	0.08
	rise	0.09	1.28	0.09
C to QN	fall	0.08	0.71	0.08
	rise	0.09	1.28	0.09
SN to Q	rise	0.10	1.28	0.10
SN to QN	fall	0.09	0.72	0.17
				0.73

Constraints Time [ns]		
Setup C to J	fall	0.88
	rise	0.79
Hold C to J	fall	0.22
	rise	0.68
Setup C to K	fall	1.21
	rise	0.42
Hold C to K	fall	0.49
	rise	0.48
Recovery C to SN	rise	1.03
Removal C to SN	rise	0.62

Capacitance [fF]	
C	3.6710
J	4.9670
K	4.8620
SN	10.7390

Leakage [pW]	
	3.23

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	405.20	395.45	540.77	539.79
	rise	389.62	382.48	532.82	533.71
C to QN	fall	389.62	382.48	532.82	533.71
	rise	405.20	395.45	540.77	539.79
SN to Q	rise	415.04	389.24	1099.73	1011.46
SN to QN	fall	415.04	389.24	1099.73	1011.46

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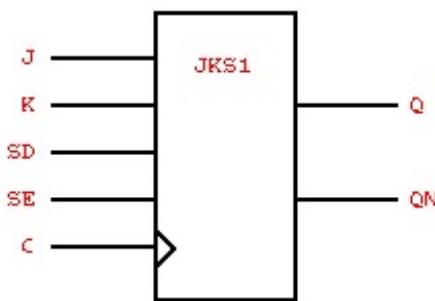
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X1
Strength	1
Cell Area	436.800 um ²
Equation	$Q = (((((!(J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))$ $QN = (((((!(J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE)))$
Clock	C
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	SD	SE	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	-	-	L	H	
R	H	L	-	L	-	-	H	L	
R	H	H	-	L	L	H	H	L	
R	H	H	-	L	H	L	L	H	
R	-	-	L	H	-	-	L	H	
R	-	-	H	H	-	-	H	L	
F	H	L	-	L	L	H	L	H	
F	H	L	-	L	H	L	H	L	
F	-	H	-	L	L	H	L	H	
F	-	H	-	L	H	L	H	L	
F	-	-	-	H	L	H	L	H	
F	-	-	-	H	H	L	H	L	
-	L	L	-	L	L	H	L	H	
-	L	L	-	L	H	L	H	L	

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
C to Q	fall	0.60	1.16	0.83
	rise	0.54	1.37	0.80
C to QN	fall	0.66	1.20	0.92
	rise	0.74	1.55	0.96

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
C to Q	fall	0.08	0.75	0.08
	rise	0.10	1.32	0.10
C to QN	fall	0.07	0.74	0.07
	rise	0.09	1.32	0.09

Constraints Time [ns]		
Setup C to SD	fall	0.98
	rise	0.24
Hold C to SD	fall	0.65
	rise	0.85
Setup C to SE	fall	1.53
	rise	0.19
Hold C to SE	fall	1.08
	rise	1.36

Capacitance [fF]	
C	3.6770
J	5.0200
K	4.8690
SD	9.3230
SE	6.5720

Leakage [pW]	
3.55	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	305.29	309.66	439.88	451.92
	rise	275.00	302.89	414.78	451.99
C to QN	fall	275.00	302.89	414.78	451.99
	rise	305.29	309.66	439.88	451.92

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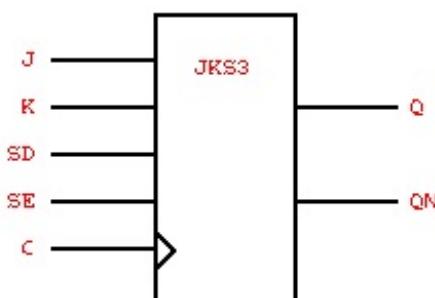
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with drive strength X3
Strength	3
Cell Area	436.800 um ²
Equation	$Q = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))$ $QN = (((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE)))$
Clock	C
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	SD	SE	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	-	L	-	-	-	L	H
R	H	L	-	L	-	-	-	H	L
R	H	H	-	L	L	H	H	H	L
R	H	H	-	L	H	L	L	H	H
R	-	-	L	H	-	-	L	H	
R	-	-	H	H	-	-	H	L	
F	H	L	-	L	L	H	L	H	H
F	H	L	-	L	H	L	H	L	
F	-	H	-	L	L	H	L	H	
F	-	H	-	L	H	L	H	L	
F	-	-	-	H	L	H	L	H	
F	-	-	-	H	H	L	H	L	
-	L	L	-	L	L	H	L	H	
-	L	L	-	L	H	L	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.64	1.20	0.87	1.42
	rise	0.57	1.38	0.83	1.64
C to QN	fall	0.75	1.28	1.01	1.54
	rise	0.83	1.62	1.05	1.84

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28

Constraints Time [ns]		
Setup C to SD	fall	0.98
	rise	0.23
Hold C to SD	fall	0.66
	rise	0.86
Setup C to SE	fall	1.53
	rise	0.19
Hold C to SE	fall	1.08
	rise	1.36

Capacitance [fF]	
C	3.6810
J	5.0120
K	4.8590
SD	9.3230
SE	6.5720

Leakage [pW]	
3.87	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	420.43	402.57	556.50
	rise	382.71	390.28	523.97
C to QN	fall	382.71	390.28	523.97
	rise	420.43	402.57	556.50
				544.67
				539.15

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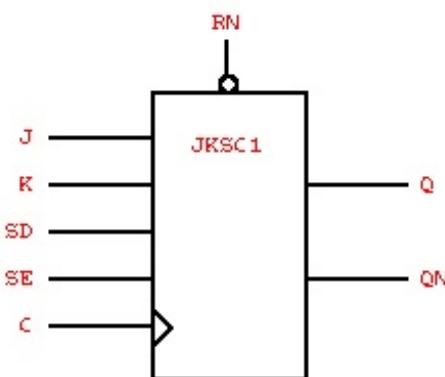
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C**.

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X1
Strength	1
Cell Area	455.000 um ²
Equation	$Q = "(!(!RN)*(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))))"$ $QN = "((!RN)+!(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))))"$
Clock	C
Reset	RN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	RN	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	L	-	-	L	H
R	H	L	H	-	L	-	-	H	L
R	H	H	H	-	L	L	H	H	L
R	H	H	H	-	L	H	L	L	H
R	-	-	H	L	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	H	L	H	-	L	L	H	L	H
F	H	L	H	-	L	H	L	H	L
F	-	H	H	-	L	L	H	L	H
F	-	H	H	-	L	H	L	H	L
F	-	-	H	-	H	L	H	L	H
F	-	-	H	-	H	H	L	H	L
-	L	L	H	-	L	L	H	L	H
-	L	L	H	-	L	H	L	H	L
-	-	-	L	-	-	-	-	-	L
-	-	-	L	-	-	-	-	-	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.66	1.22	0.89	1.45
	rise	0.51	1.34	0.78	1.60
C to QN	fall	0.63	1.18	0.89	1.44
	rise	0.79	1.61	1.02	1.84
RN to Q	fall	0.21	0.77	1.23	1.83
RN to QN	rise	0.40	1.23	1.46	2.28

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.07	0.74	0.07	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.74	0.15	0.75
	rise	0.11	1.32	0.11	1.32

Constraints Time [ns]		
Recovery C to RN	rise	1.20
Removal C to RN	rise	1.37
Setup C to SD	fall	1.00
	rise	0.26
Hold C to SD	fall	0.65
	rise	0.87
Setup C to SE	fall	1.56
	rise	0.21
Hold C to SE	fall	1.07
	rise	1.39

Capacitance [fF]	
C	3.6780
J	5.1090
K	4.8790
RN	11.6910
SD	9.3100
SE	6.5930

Leakage [pW]	
3.59	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
C to Q	fall	333.08	336.69	468.57
	rise	280.86	313.00	419.68
C to QN	fall	280.86	313.00	419.68
	rise	333.08	336.69	468.57
RN to Q	fall	291.45	337.46	826.02
RN to QN	rise	291.45	337.46	826.02

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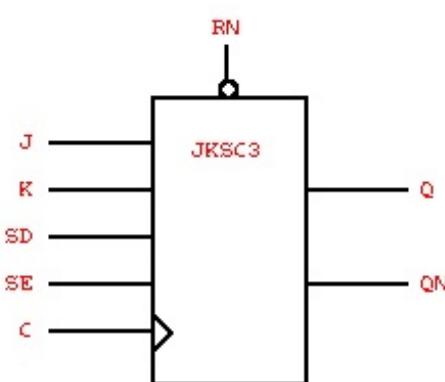
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C**.

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, and drive strength X3
Strength	3
Cell Area	455.000 um ²
Equation	$Q = "(!(!RN)*(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))))"$ $QN = "((!RN)+!(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))))"$
Clock	C
Reset	RN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	RN	SD	SE	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	L	-	-	L	H
R	H	L	H	-	L	-	-	H	L
R	H	H	H	-	L	L	H	H	L
R	H	H	H	-	L	H	L	L	H
R	-	-	H	L	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	H	L	H	-	L	L	H	L	H
F	H	L	H	-	L	H	L	H	L
F	-	H	H	-	L	L	H	L	H
F	-	H	H	-	L	H	L	H	L
F	-	-	H	-	H	L	H	L	H
F	-	-	H	-	H	H	L	H	L
-	L	L	H	-	L	L	H	L	H
-	L	L	H	-	L	H	L	H	L
-	-	-	L	-	-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.69	1.26	0.92	1.49
	rise	0.53	1.34	0.80	1.61
C to QN	fall	0.71	1.25	0.97	1.51
	rise	0.88	1.67	1.11	1.90
RN to Q	fall	0.25	0.80	1.32	1.92
RN to QN	rise	0.49	1.29	1.62	2.40

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.71	0.08	0.71
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.08	0.71	0.16	0.72
	rise	0.10	1.28	0.11	1.28

Constraints Time [ns]		
Recovery C to RN	rise	1.49
Removal C to RN	rise	1.37
Setup C to SD	fall	1.00
	rise	0.25
Hold C to SD	fall	0.65
	rise	0.87
Setup C to SE	fall	1.56
	rise	0.21
Hold C to SE	fall	1.07
	rise	1.39

Capacitance [fF]	
C	3.6820
J	5.1070
K	4.8630
RN	11.6800
SD	9.3100
SE	6.5960

Leakage [pW]	
3.91	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	452.14	431.02	589.48	573.04
	rise	385.21	398.90	526.24	548.81
C to QN	fall	385.21	398.90	526.24	548.81
	rise	452.14	431.02	589.48	573.04
RN to Q	fall	412.50	430.61	1009.44	965.23
RN to QN	rise	412.50	430.61	1009.44	965.23

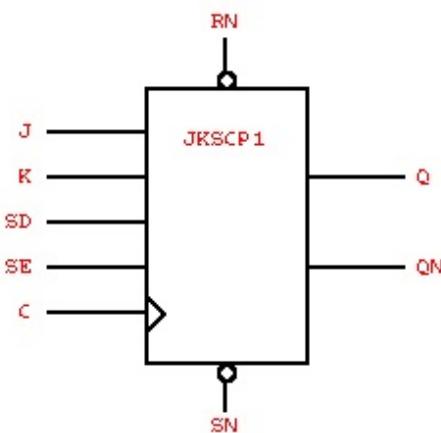
Databook Build Date: Wednesday Jun 18 17:26 2014

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 Conditions for characterization library c35_CORELIB_TYP, corner c35_CORELIB_TYP_typical: Vdd= 3.30V, Tj= 25.0 deg. C .
 Output transition is defined from 20% to 80% (rising) and from 80% to 20% (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X1
Strength	1
Cell Area	473.200 um ²
Equation	$Q = "(!(!RN)*((((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))+(!SN))"$ $QN = "(!(!SN)*(!(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))+(!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table										
C	J	K	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN
R	L	H	H	-	L	H	-	-	L	H
R	H	L	H	-	L	H	-	-	H	L
R	H	H	H	-	L	H	L	H	H	L
R	H	H	H	-	L	H	H	L	L	H
R	-	-	H	L	H	H	-	-	L	H
R	-	-	H	H	H	H	-	-	H	L
F	H	L	H	-	L	H	L	H	L	H
F	H	L	H	-	L	H	H	L	H	L
F	-	H	H	-	L	H	L	H	L	H
F	-	H	H	-	L	H	H	L	H	L
F	-	H	H	-	H	H	L	H	L	H
-	L	L	H	-	L	H	L	H	L	H
-	L	L	H	-	L	H	H	L	H	L
-	-	-	L	-	-	L	-	-	L	L
-	-	-	L	-	-	H	-	-	L	H
-	-	-	H	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.67	1.24	0.90	1.47
	rise	0.53	1.36	0.79	1.62
C to QN	fall	0.68	1.23	0.95	1.50
	rise	0.76	1.58	0.99	1.81
RN to Q	fall	0.22	0.78	1.25	1.89
	rise	0.16	0.99	-0.02	0.85
RN to QN	rise	0.35	1.19	1.38	2.20
SN to Q	rise	0.41	1.24	1.46	2.28
SN to QN	fall	0.25	0.84	1.32	1.99
	rise	0.18	1.01	0.07	0.94

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.09	0.75	0.09	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.08	0.74	0.08	0.74
	rise	0.09	1.32	0.09	1.32
RN to Q	fall	0.08	0.75	0.15	0.79
	rise	0.09	1.32	0.15	1.36
RN to QN	rise	0.11	1.32	0.11	1.32
SN to Q	rise	0.10	1.32	0.10	1.32
SN to QN	fall	0.09	0.76	0.16	0.80
	rise	0.10	1.32	0.16	1.36

Constraints Time [ns]		
Recovery C to RN	rise	1.24
Removal C to RN	rise	1.32
Setup C to SD	fall	0.93
	rise	0.33
Hold C to SD	fall	0.58
	rise	0.83
Setup C to SE	fall	1.45
	rise	0.28
Hold C to SE	fall	1.00
	rise	1.27
Recovery C to SN	rise	0.78
Removal C to SN	rise	0.60

Capacitance [fF]	
C	3.6840
J	5.1620
K	4.8750
RN	13.2690
SD	9.2770
SE	6.4780
SN	11.8100

Leakage [pW]	
	3.73

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	159.48	168.60	128.91	145.34
	rise	137.73	165.18	112.64	148.89
C to QN	fall	137.73	165.18	112.64	148.89
	rise	159.48	168.60	128.91	145.34
RN to Q	fall	313.30	372.04	1117.21	1228.49
	rise	167.96	202.09	976.85	1307.76
RN to QN	rise	299.11	356.13	826.68	878.86
SN to Q	rise	322.30	351.42	860.33	884.39
SN to QN	fall	324.66	378.44	1053.80	1158.83
	rise	167.61	218.33	815.44	1137.02

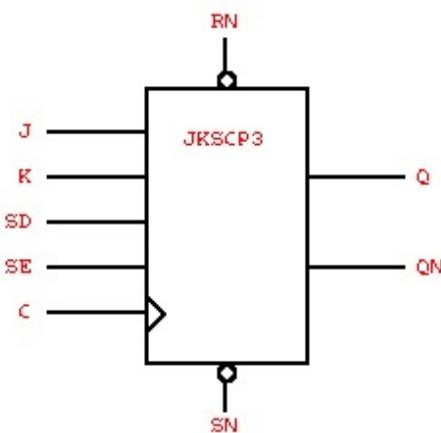
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C**.
 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low reset, active low set, and drive strength X3
Strength	3
Cell Area	473.200 um ²
Equation	$Q = "(!(!RN)*((((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))+(!SN))"$ $QN = "(!(!SN)*(!((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState))) * !SE) + (SD * SE))+(!RN))"$
Clock	C
Reset	RN
Set	SN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table											
C	J	K	RN	SD	SE	SN	IQ _(int)	IQN _(int)	Q	QN	
R	L	H	H	-	L	H	-	-	L	H	
R	H	L	H	-	L	H	-	-	H	L	
R	H	H	H	-	L	H	L	H	H	L	
R	H	H	H	-	L	H	H	L	L	H	
R	-	-	H	L	H	H	-	-	L	H	
R	-	-	H	H	H	H	-	-	H	L	
F	H	L	H	-	L	H	L	H	L	H	
F	H	L	H	-	L	H	H	L	H	L	
F	-	H	H	-	L	H	L	H	L	H	
F	-	H	H	-	L	H	H	L	H	L	
F	-	-	H	-	H	H	L	H	L	H	
-	L	L	H	-	L	H	L	H	L	H	
-	L	L	H	-	L	H	H	L	H	L	
-	-	-	L	-	-	L	-	-	L	L	
-	-	-	L	-	-	H	-	-	L	H	
-	-	-	H	-	-	L	-	-	H	L	

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.70	1.27	0.94	1.50
	rise	0.55	1.36	0.81	1.62
C to QN	fall	0.76	1.30	1.02	1.57
	rise	0.83	1.63	1.06	1.86
RN to Q	fall	0.26	0.82	1.33	1.97
	rise	0.18	0.99	0.05	0.90
RN to QN	rise	0.43	1.23	1.51	2.30
SN to Q	rise	0.48	1.28	1.58	2.37
SN to QN	fall	0.29	0.88	1.40	2.06
	rise	0.20	1.02	0.14	0.99

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.09	0.72	0.09	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
RN to Q	fall	0.08	0.72	0.16	0.76
	rise	0.09	1.28	0.15	1.31
RN to QN	rise	0.10	1.28	0.10	1.28
SN to Q	rise	0.09	1.28	0.10	1.28
SN to QN	fall	0.10	0.73	0.17	0.77
	rise	0.10	1.28	0.16	1.32

Constraints Time [ns]		
Recovery C to RN	rise	1.52
Removal C to RN	rise	1.32
Setup C to SD	fall	0.93
	rise	0.32
Hold C to SD	fall	0.58
	rise	0.83
Setup C to SE	fall	1.45
	rise	0.28
Hold C to SE	fall	1.00
	rise	1.27
Recovery C to SN	rise	0.85
Removal C to SN	rise	0.60

Capacitance [fF]		Leakage [pW]
C	3.6830	
J	5.1650	
K	4.8600	
RN	13.2510	
SD	9.2750	
SE	6.4790	
SN	11.7970	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
C to Q	fall	274.26	261.94	245.27	239.47
	rise	243.92	253.62	220.23	236.84
C to QN	fall	243.92	253.62	220.23	236.84
	rise	274.26	261.94	245.27	239.47
RN to Q	fall	419.21	463.43	1317.16	1334.58
	rise	248.48	281.09	1222.01	1422.35
RN to QN	rise	415.67	450.10	997.77	980.47
SN to Q	rise	431.06	441.15	1031.17	987.13
SN to QN	fall	431.92	469.36	1259.74	1267.08
	rise	259.36	305.65	1074.09	1257.70

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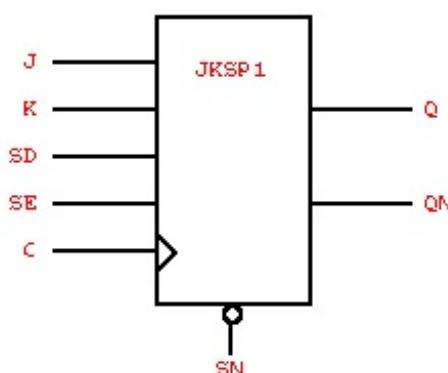
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C**.

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X1
Strength	1
Cell Area	455.000 um ²
Equation	$Q = "((!SN)+(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) * !SE) + (SD * SE)))"$ $QN = "((!(!SN)+(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) * !SE) + (SD * SE))))"$
Clock	C
Set	SN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	SD	SE	SN	IQ(int)	IQN(int)	Q	QN
R	L	H	-	L	H	-	-	L	H
R	H	L	-	L	H	-	-	H	L
R	H	H	-	L	H	L	H	H	L
R	H	H	-	L	H	H	L	L	H
R	-	-	L	H	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	H	L	-	L	H	L	H	L	H
F	H	L	-	L	H	H	L	H	L
F	-	H	-	L	H	L	H	L	H
F	-	H	-	L	H	H	L	H	L
F	-	-	H	H	L	H	L	H	H
F	-	-	H	H	H	L	H	H	L
-	L	L	-	L	H	L	H	L	H
-	L	L	-	L	H	H	L	H	L
-	-	-	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.62	1.18	0.84	1.41
	rise	0.55	1.38	0.82	1.64
C to QN	fall	0.70	1.25	0.97	1.52
	rise	0.71	1.53	0.93	1.76
SN to Q	rise	0.46	1.28	1.55	2.36
SN to QN	fall	0.24	0.81	1.30	1.91

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
C to Q	fall	0.08	0.75	0.08	0.75
	rise	0.10	1.32	0.10	1.32
C to QN	fall	0.08	0.74	0.08	0.74
	rise	0.09	1.32	0.09	1.32
SN to Q	rise	0.10	1.32	0.11	1.32
SN to QN	fall	0.09	0.75	0.16	0.76

Constraints Time [ns]		
Setup C to SD	fall	0.91
	rise	0.30
Hold C to SD	fall	0.59
	rise	0.82
Setup C to SE	fall	1.43
	rise	0.25
Hold C to SE	fall	1.00
	rise	1.25
Recovery C to SN	rise	0.85
Removal C to SN	rise	0.69

Capacitance [fF]	
C	3.6830
J	5.0410
K	4.8700
SD	9.2950
SE	6.4990
SN	11.1400

Leakage [pW]	
3.51	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
C to Q	fall	306.89	315.81	440.59	457.75
	rise	308.87	332.84	449.46	481.42
C to QN	fall	308.87	332.84	449.46	481.42
	rise	306.89	315.81	440.59	457.75
SN to Q	rise	311.56	334.58	852.50	864.51
SN to QN	fall	311.56	334.58	852.50	864.51

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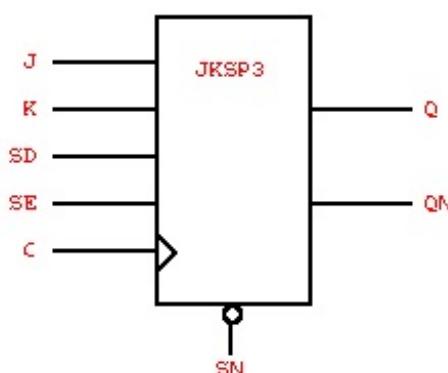
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0 deg. C**.

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Description	Pos. edge Flip-Flop with active low set, and drive strength X3
Strength	3
Cell Area	455.000 um ²
Equation	$Q = "((!SN)+(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) * !SE) + (SD * SE)))"$ $QN = "((!(!SN)+(((((!J * !K) * PreviousFlipFlopState) + (J * !K)) + ((J * K) * !(PreviousFlipFlopState)))) * !SE) + (SD * SE))))"$
Clock	C
Set	SN
Type	Sequential
Input	J, K, SD, SE
Output	Q, QN



State Table									
C	J	K	SD	SE	SN	IQ(int)	IQN(int)	Q	QN
R	L	H	-	L	H	-	-	L	H
R	H	L	-	L	H	-	-	H	L
R	H	H	-	L	H	L	H	H	L
R	H	H	-	L	H	H	L	L	H
R	-	-	L	H	H	-	-	L	H
R	-	-	H	H	H	-	-	H	L
F	H	L	-	L	H	L	H	L	H
F	H	L	-	L	H	H	L	H	L
F	-	H	-	L	H	L	H	L	H
F	-	H	-	L	H	H	L	H	L
F	-	-	H	H	L	H	L	H	H
F	-	-	H	H	H	L	H	H	L
-	L	L	-	L	H	L	H	L	H
-	L	L	-	L	H	H	L	H	L
-	-	-	-	-	L	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.65	1.21	0.88	1.44
	rise	0.58	1.39	0.84	1.65
C to QN	fall	0.79	1.33	1.06	1.60
	rise	0.78	1.57	1.00	1.80
SN to Q	rise	0.56	1.35	1.70	2.48
SN to QN	fall	0.28	0.85	1.38	1.99

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
C to Q	fall	0.08	0.72	0.08	0.72
	rise	0.09	1.28	0.09	1.28
C to QN	fall	0.08	0.72	0.08	0.71
	rise	0.09	1.28	0.09	1.28
SN to Q	rise	0.10	1.28	0.10	1.28
SN to QN	fall	0.09	0.72	0.17	0.73

Constraints Time [ns]		
Setup C to SD	fall	0.91
	rise	0.30
Hold C to SD	fall	0.59
	rise	0.82
Setup C to SE	fall	1.43
	rise	0.25
Hold C to SE	fall	1.01
	rise	1.25
Recovery C to SN	rise	0.93
Removal C to SN	rise	0.69

Capacitance [fF]	
C	3.6840
J	5.0460
K	4.8590
SD	9.2960
SE	6.4980
SN	11.1560

Leakage [pW]	
3.83	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
C to Q	fall	417.56	407.88	552.07
	rise	418.53	420.85	561.00
C to QN	fall	418.53	420.85	561.00
	rise	417.56	407.88	552.07
SN to Q	rise	424.65	424.73	1034.81
SN to QN	fall	424.65	424.73	1034.81
				969.91

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Cell Area	36.400 um ²
Equation	$Q = "0"$
Type	Constant
Output	Q

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	$Q = "1"$
Type	Constant
Output	Q

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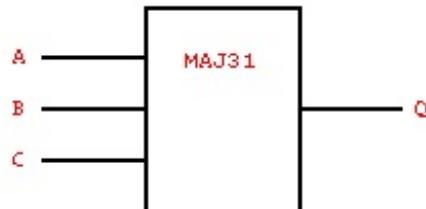
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	109.200 um ²
Equation	$Q = (((B \& A) (C \& B)) (C \& A))'$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	L
L	-	L	L
H	H	-	H
H	-	H	H
-	L	L	L
-	H	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.27	0.77	1.17
	rise	0.21	0.94	0.24
B to Q	fall	0.26	0.79	1.07
	rise	0.19	0.93	0.11
C to Q	fall	0.22	0.74	1.15
	rise	0.19	0.92	0.18

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.64	0.15
	rise	0.08	1.16	0.14
B to Q	fall	0.08	0.65	0.14
	rise	0.08	1.16	0.14
C to Q	fall	0.08	0.65	0.17
	rise	0.08	1.16	0.14

Capacitance [fF]	
A	11.7690
B	10.7700
C	4.4440

Leakage [pW]	
0.77	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	202.72	220.49	622.79
	rise	62.45	64.18	437.38
B to Q	fall	181.48	204.73	561.71
	rise	66.81	67.85	393.86
C to Q	fall	133.18	154.65	479.91
	rise	78.30	76.98	362.10

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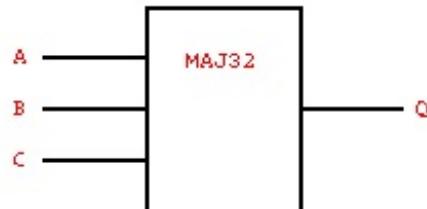
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	127.400 um ²
Equation	$Q = (((B \& A) (C \& B)) (C \& A))"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	L
L	-	L	L
H	H	-	H
H	-	H	H
-	L	L	L
-	H	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	0.23	0.77	0.96
	rise	0.18	0.99	0.04
B to Q	fall	0.23	0.78	1.23
	rise	0.19	1.00	0.28
C to Q	fall	0.19	0.74	1.06
	rise	0.16	0.97	0.08

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	0.07	0.73	0.15
	rise	0.09	1.29	0.14
B to Q	fall	0.08	0.73	0.15
	rise	0.09	1.29	0.14
C to Q	fall	0.08	0.73	0.16
	rise	0.09	1.29	0.14

Capacitance [fF]	
A	17.7660
B	16.3110
C	7.3620

Leakage [pW]	
0.96	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	346.16	369.19	1095.38
	rise	94.97	97.29	757.19
B to Q	fall	315.34	344.92	968.13
	rise	102.79	105.63	675.20
C to Q	fall	230.35	260.31	899.97
	rise	116.00	116.52	651.12

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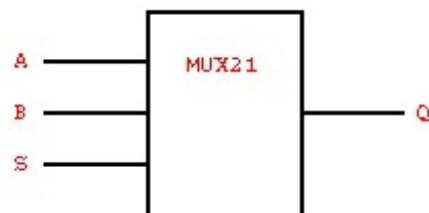
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	109.200 um ²
Equation	$Q = ((A \& !S) (B \& S))$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	L
H	-	L	H
-	L	H	L
-	H	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.24	0.79	0.98
	rise	0.19	1.02	0.04
B to Q	fall	0.24	0.80	0.98
	rise	0.19	1.01	0.05
S to Q	fall	0.29	0.85	1.07
	rise	0.31	1.14	1.19

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.75	0.16
	rise	0.10	1.32	0.15
B to Q	fall	0.08	0.75	0.16
	rise	0.10	1.32	0.15
S to Q	fall	0.08	0.75	0.15
	rise	0.10	1.32	0.15

Capacitance [fF]	
A	5.1660
B	5.1090
S	8.1730

Leakage [pW]	
0.90	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	138.38	148.43	529.71
	rise	84.85	86.17	410.79
B to Q	fall	150.93	163.84	540.53
	rise	70.78	69.59	399.12
S to Q	fall	149.63	162.42	512.61
	rise	133.59	134.23	466.68

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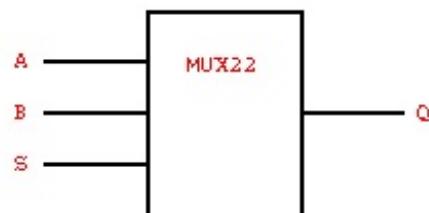
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	109.200 um ²
Equation	$Q = ((A \& !S) (B \& S))$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	L
H	-	L	H
-	L	H	L
-	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.21	0.75	0.93	1.58
	rise	0.17	0.98	0.01	0.88
B to Q	fall	0.22	0.75	0.93	1.59
	rise	0.16	0.97	0.01	0.88
S to Q	fall	0.27	0.81	1.00	1.62
	rise	0.34	1.15	1.42	2.23

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.72	0.14	0.80
	rise	0.09	1.29	0.14	1.35
B to Q	fall	0.07	0.72	0.14	0.80
	rise	0.09	1.29	0.14	1.35
S to Q	fall	0.07	0.72	0.13	0.78
	rise	0.09	1.29	0.14	1.34

Capacitance [fF]	
A	8.8250
B	8.7600
S	10.7060

Leakage [pW]	
1.12	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	245.87	261.88	1029.55	1146.74
	rise	147.90	153.72	792.79	994.66
B to Q	fall	271.65	293.73	1050.92	1176.59
	rise	120.69	121.94	772.81	963.69
S to Q	fall	237.94	260.25	781.35	902.92
	rise	223.01	225.38	724.64	855.27

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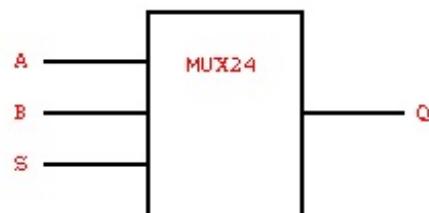
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	24
Cell Area	182.000 um ²
Equation	$Q = ((A \& !S) (B \& S))$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	L
H	-	L	H
-	L	H	L
-	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.16	0.69	0.98	1.60
	rise	0.12	0.93	-0.05	0.81
B to Q	fall	0.22	0.78	0.94	1.63
	rise	0.17	0.98	0.05	0.91
S to Q	fall	0.27	0.81	0.71	1.39
	rise	0.28	1.09	1.25	2.06

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.06	0.72	0.12	0.77
	rise	0.07	1.28	0.12	1.33
B to Q	fall	0.07	0.72	0.15	0.79
	rise	0.08	1.28	0.13	1.34
S to Q	fall	0.07	0.72	0.13	0.80
	rise	0.07	1.28	0.13	1.32

Capacitance [fF]	
A	14.1190
B	17.6950
S	22.1120

Leakage [pW]	
2.08	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	346.54	388.96	1626.65	1800.39
	rise	155.78	167.44	1166.71	1523.06
B to Q	fall	556.07	619.41	2130.13	2387.13
	rise	210.06	209.19	1524.44	1885.44
S to Q	fall	473.34	526.50	1538.28	1913.35
	rise	389.82	398.89	1551.28	1784.61

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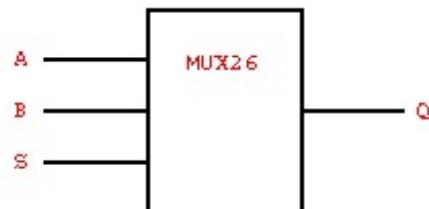
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	26
Cell Area	182.000 um ²
Equation	$Q = ((A \& !S) (B \& S))$
Type	Combinational
Input	A, B, S
Output	Q



State Table			
A	B	S	Q
L	-	L	L
H	-	L	H
-	L	H	L
-	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.18	0.69	1.02	1.61
	rise	0.13	0.95	0.03	0.89
B to Q	fall	0.20	0.72	0.73	1.39
	rise	0.17	0.98	0.30	1.14
S to Q	fall	0.26	0.77	0.92	1.55
	rise	0.27	1.08	1.08	1.90

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	0.06	0.67	0.13	0.73
	rise	0.07	1.28	0.13	1.33
B to Q	fall	0.06	0.68	0.15	0.77
	rise	0.08	1.28	0.13	1.32
S to Q	fall	0.06	0.67	0.13	0.74
	rise	0.07	1.28	0.12	1.35

Capacitance [fF]	
A	19.7430
B	22.2050
S	33.2680

Leakage [pW]	
2.38	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		30.00	960.00	30.00	960.00
A to Q	fall	545.26	608.01	2441.50	2660.47
	rise	264.20	277.45	1799.99	2264.68
B to Q	fall	702.98	794.67	2634.53	3096.19
	rise	344.62	342.76	2297.35	2570.92
S to Q	fall	673.91	745.81	2523.62	2901.04
	rise	590.57	607.78	2150.38	2702.62

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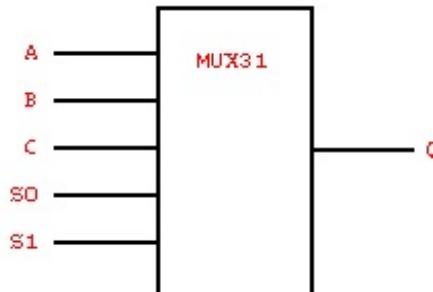
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	200.200 um ²
Equation	$Q = (((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1))$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	L
H	-	-	L	L	H
-	L	-	H	L	L
-	H	-	H	L	H
-	-	L	-	H	L
-	-	H	-	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.32	0.93	1.09	1.81
	rise	0.27	1.11	0.19	1.08
B to Q	fall	0.33	0.94	1.09	1.81
	rise	0.26	1.10	0.20	1.08
C to Q	fall	0.25	0.81	1.00	1.67
	rise	0.19	1.02	0.06	0.95
S0 to Q	fall	0.40	1.02	1.21	1.90
	rise	0.44	1.27	1.41	2.24
S1 to Q	fall	0.33	0.89	1.20	1.84
	rise	0.35	1.18	1.59	2.42

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.11	0.77	0.18	0.84
	rise	0.11	1.33	0.16	1.38
B to Q	fall	0.11	0.77	0.18	0.84
	rise	0.11	1.33	0.16	1.38
C to Q	fall	0.08	0.75	0.16	0.82
	rise	0.10	1.33	0.16	1.38
S0 to Q	fall	0.11	0.77	0.18	0.82
	rise	0.11	1.33	0.16	1.36
S1 to Q	fall	0.08	0.76	0.15	0.81
	rise	0.11	1.33	0.16	1.37

Capacitance [fF]	
A	6.9460
B	6.9040
C	5.1090
S0	9.2840
S1	7.0040

Leakage [pW]	
	1.50

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	238.57	263.84	816.62	904.18
	rise	163.20	170.52	634.72	758.23
B to Q	fall	258.58	287.39	833.85	926.81
	rise	141.77	145.68	616.88	735.44
C to Q	fall	157.28	171.09	548.24	605.47
	rise	76.10	75.23	406.85	487.28
S0 to Q	fall	240.61	268.47	670.73	745.01
	rise	222.11	227.68	608.06	684.63
S1 to Q	fall	145.80	169.58	424.05	510.25
	rise	163.15	164.91	534.99	591.20

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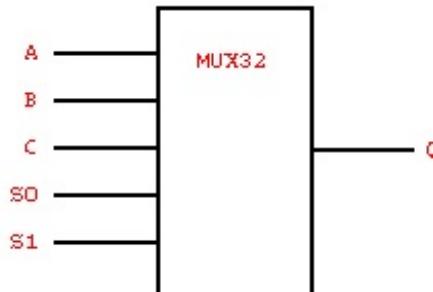
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	236.600 μm^2
Equation	$Q = (((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1))$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	L
H	-	-	L	L	H
-	L	-	H	L	L
-	H	-	H	L	H
-	-	L	-	H	L
-	-	H	-	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.30	0.93	1.07	1.81
	rise	0.26	1.11	0.17	1.08
B to Q	fall	0.31	0.94	1.07	1.81
	rise	0.24	1.10	0.17	1.08
C to Q	fall	0.20	0.76	0.75	1.45
	rise	0.16	1.00	0.22	1.11
S0 to Q	fall	0.39	1.02	1.18	1.90
	rise	0.42	1.27	1.31	2.16
S1 to Q	fall	0.30	0.86	1.26	1.93
	rise	0.29	1.14	1.29	2.14

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.09	0.78	0.17	0.84
	rise	0.09	1.34	0.15	1.39
B to Q	fall	0.09	0.78	0.17	0.84
	rise	0.09	1.33	0.15	1.39
C to Q	fall	0.06	0.76	0.14	0.84
	rise	0.08	1.33	0.13	1.38
S0 to Q	fall	0.09	0.78	0.16	0.83
	rise	0.09	1.34	0.15	1.38
S1 to Q	fall	0.07	0.77	0.13	0.81
	rise	0.09	1.33	0.13	1.39

Capacitance [fF]	
A	13.7450
B	13.8690
C	7.9840
S0	15.1880
S1	10.7160

Leakage [pW]	
	2.23

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	429.34	479.38	1574.29	1762.81
	rise	283.69	301.06	1209.27	1488.35
B to Q	fall	468.31	526.50	1607.37	1807.76
	rise	241.76	253.43	1177.58	1444.40
C to Q	fall	234.99	261.04	890.21	1057.44
	rise	108.06	109.53	763.27	880.14
S0 to Q	fall	419.61	475.32	1236.60	1384.08
	rise	387.78	403.55	1103.00	1277.17
S1 to Q	fall	220.86	259.62	793.43	913.89
	rise	243.96	251.05	846.99	1033.79

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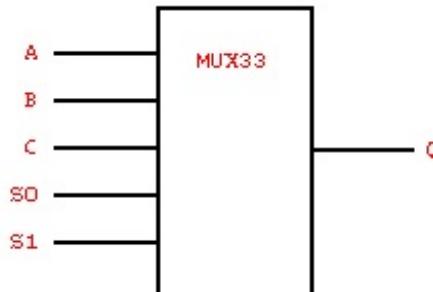
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	33
Cell Area	291.200 μm^2
Equation	$Q = (((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1))$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	L
H	-	-	L	L	H
-	L	-	H	L	L
-	H	-	H	L	H
-	-	L	-	H	L
-	-	H	-	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	0.28	0.87	1.20
	rise	0.23	1.03	0.25
B to Q	fall	0.31	0.90	0.88
	rise	0.27	1.07	0.52
C to Q	fall	0.16	0.67	0.98
	rise	0.13	0.92	-0.06
S0 to Q	fall	0.36	0.95	1.02
	rise	0.36	1.16	1.19
S1 to Q	fall	0.25	0.77	1.27
	rise	0.29	1.08	1.37

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	0.09	0.72	0.17
	rise	0.09	1.27	0.15
B to Q	fall	0.10	0.73	0.19
	rise	0.09	1.27	0.15
C to Q	fall	0.06	0.70	0.12
	rise	0.08	1.27	0.13
S0 to Q	fall	0.09	0.73	0.17
	rise	0.09	1.27	0.15
S1 to Q	fall	0.07	0.71	0.13
	rise	0.09	1.27	0.13

Capacitance [fF]	
A	19.6570
B	21.8940
C	11.6410
S0	32.4130
S1	20.8230

Leakage [pW]	
	2.98

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	722.67	838.02	2549.43	2820.18
	rise	438.73	465.13	1897.13	2310.58
B to Q	fall	878.42	1025.36	2705.96	3204.28
	rise	508.03	528.56	2297.54	2557.97
C to Q	fall	342.59	383.01	1571.99	1777.37
	rise	162.01	168.17	1107.25	1498.77
S0 to Q	fall	850.15	971.17	2635.65	3026.92
	rise	764.23	789.36	2304.25	2734.73
S1 to Q	fall	425.59	502.68	1637.08	1966.73
	rise	488.19	498.89	1803.45	2227.53

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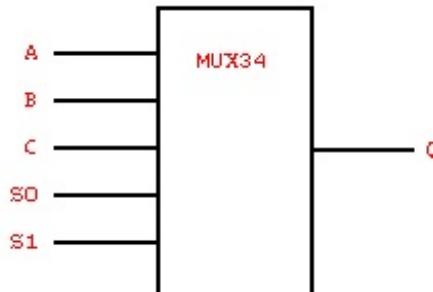
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	34
Cell Area	400.400 um ²
Equation	$Q = (((A \& !S1) \& !S0) ((B \& !S1) \& S0)) (C \& S1))$
Type	Combinational
Input	A, B, C, S0, S1
Output	Q



State Table					
A	B	C	S0	S1	Q
L	-	-	L	L	L
H	-	-	L	L	H
-	L	-	H	L	L
-	H	-	H	L	H
-	-	L	-	H	L
-	-	H	-	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.26	0.83	1.03	1.72
	rise	0.21	1.01	0.04	0.91
B to Q	fall	0.27	0.84	1.03	1.72
	rise	0.19	1.00	0.04	0.91
C to Q	fall	0.18	0.70	0.86	1.51
	rise	0.14	0.94	-0.04	0.83
S0 to Q	fall	0.32	0.89	1.14	1.80
	rise	0.32	1.13	1.14	1.95
S1 to Q	fall	0.28	0.80	1.02	1.64
	rise	0.24	1.04	1.07	1.88

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	0.08	0.71	0.15	0.77
	rise	0.08	1.26	0.13	1.32
B to Q	fall	0.08	0.71	0.15	0.77
	rise	0.08	1.26	0.13	1.32
C to Q	fall	0.06	0.69	0.12	0.77
	rise	0.07	1.26	0.12	1.33
S0 to Q	fall	0.08	0.71	0.15	0.76
	rise	0.08	1.26	0.13	1.31
S1 to Q	fall	0.06	0.70	0.12	0.76
	rise	0.07	1.26	0.12	1.32

Capacitance [fF]	
A	35.7870
B	35.5350
C	24.8820
S0	35.7370
S1	26.3930

Leakage [pW]	
3.72	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		20.00	640.00	20.00	640.00
A to Q	fall	975.27	1113.33	4280.83	4894.59
	rise	733.66	794.99	3190.28	4289.94
B to Q	fall	1100.12	1262.20	4384.59	5036.01
	rise	600.04	647.79	3090.43	4148.68
C to Q	fall	637.04	709.84	2814.09	3334.46
	rise	220.08	226.10	1999.84	2741.66
S0 to Q	fall	904.47	1056.60	3264.54	3739.93
	rise	967.48	1023.85	2913.80	3624.40
S1 to Q	fall	495.29	595.07	2035.89	2495.19
	rise	574.41	602.70	2278.04	2895.22

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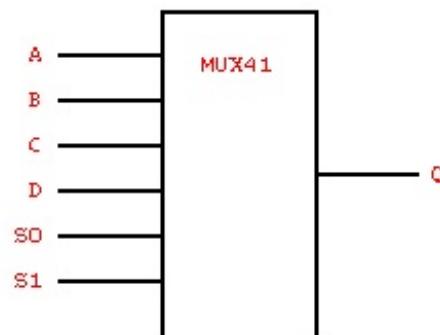
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	236.600 um ²
Equation	$Q = (((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0))"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table							
A	B	C	D	S0	S1	Q	
L	-	-	-	L	L	L	
H	-	-	-	L	L	H	
-	L	-	-	H	L	L	
-	H	-	-	H	L	H	
-	-	L	-	L	H	L	
-	-	H	-	L	H	H	
-	-	-	L	H	H	L	
-	-	-	H	H	H	H	

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.31	0.92	1.08	1.79
	rise	0.26	1.09	0.18	1.07
B to Q	fall	0.31	0.93	1.08	1.79
	rise	0.25	1.08	0.18	1.07
C to Q	fall	0.32	0.94	1.09	1.81
	rise	0.26	1.09	0.19	1.08
D to Q	fall	0.33	0.94	1.09	1.81
	rise	0.26	1.09	0.19	1.08
S0 to Q	fall	0.42	1.04	1.21	1.90
	rise	0.44	1.28	1.36	2.19
S1 to Q	fall	0.19	0.80	1.23	1.90
	rise	0.25	1.08	1.18	2.03

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.10	0.77	0.17	0.83
	rise	0.10	1.32	0.16	1.37
B to Q	fall	0.10	0.77	0.17	0.83
	rise	0.10	1.32	0.16	1.37
C to Q	fall	0.10	0.77	0.18	0.83
	rise	0.10	1.32	0.16	1.37
D to Q	fall	0.10	0.77	0.18	0.83
	rise	0.10	1.32	0.16	1.37
S0 to Q	fall	0.11	0.77	0.17	0.82
	rise	0.10	1.32	0.16	1.36
S1 to Q	fall	0.09	0.77	0.14	0.81
	rise	0.10	1.32	0.14	1.37

Capacitance [fF]	
A	7.0090
B	6.9900
C	6.9630
D	6.9660
S0	17.5750
S1	7.3440

Leakage [pW]	
	1.98

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	229.39	254.21	805.66	895.53
	rise	155.17	160.52	622.16	751.10
B to Q	fall	248.60	277.73	821.72	918.38
	rise	133.62	137.10	604.13	727.89
C to Q	fall	253.53	282.88	827.90	922.48
	rise	142.20	142.90	611.22	731.01
D to Q	fall	272.90	306.39	843.99	945.37
	rise	121.03	119.42	593.28	708.46
S0 to Q	fall	326.88	360.11	1001.64	1122.74
	rise	291.60	297.14	906.34	1040.54
S1 to Q	fall	146.38	177.61	593.21	680.69
	rise	130.29	133.45	498.83	621.85

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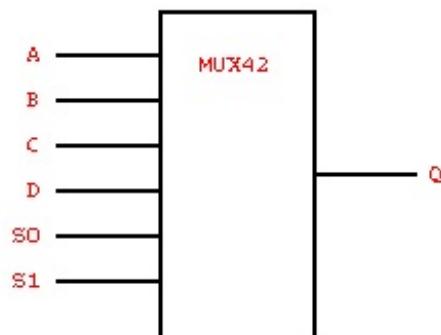
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	42
Cell Area	273.000 um ²
Equation	$Q = (((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0))"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table						
A	B	C	D	S0	S1	Q
L	-	-	-	L	L	L
H	-	-	-	L	L	H
-	L	-	-	H	L	L
-	H	-	-	H	L	H
-	-	L	-	L	H	L
-	-	H	-	L	H	H
-	-	-	L	H	H	L
-	-	-	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.28	0.88	1.04	1.74
	rise	0.23	1.05	0.14	1.01
B to Q	fall	0.29	0.88	1.04	1.74
	rise	0.23	1.04	0.13	1.01
C to Q	fall	0.29	0.88	1.03	1.73
	rise	0.23	1.05	0.15	1.02
D to Q	fall	0.30	0.89	1.07	1.77
	rise	0.22	1.04	0.11	0.99
S0 to Q	fall	0.37	0.97	1.15	1.82
	rise	0.38	1.20	1.25	2.06
S1 to Q	fall	0.19	0.78	1.11	1.79
	rise	0.23	1.05	1.05	1.88

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.09	0.74	0.16	0.81
	rise	0.09	1.29	0.14	1.34
B to Q	fall	0.09	0.74	0.16	0.81
	rise	0.09	1.29	0.14	1.34
C to Q	fall	0.09	0.74	0.16	0.80
	rise	0.09	1.29	0.14	1.34
D to Q	fall	0.09	0.74	0.16	0.80
	rise	0.09	1.29	0.14	1.34
S0 to Q	fall	0.09	0.74	0.16	0.79
	rise	0.09	1.29	0.14	1.33
S1 to Q	fall	0.09	0.74	0.14	0.79
	rise	0.09	1.29	0.14	1.34

Capacitance [fF]	
A	12.2380
B	12.3820
C	12.4990
D	12.3160
S0	30.1380
S1	11.5370

Leakage [pW]	
	2.61

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	405.02	450.26	1541.72	1719.92
	rise	290.74	302.90	1196.18	1478.30
B to Q	fall	445.36	498.11	1579.07	1770.95
	rise	247.39	255.61	1161.71	1434.73
C to Q	fall	462.70	515.83	1598.28	1799.38
	rise	241.38	246.00	1171.96	1436.49
D to Q	fall	497.69	558.16	1620.71	1816.72
	rise	198.96	196.96	1107.07	1365.73
S0 to Q	fall	565.01	623.02	1909.74	2168.67
	rise	506.17	518.68	1727.70	2035.27
S1 to Q	fall	261.94	316.39	1124.76	1292.24
	rise	230.17	237.54	897.34	1167.13

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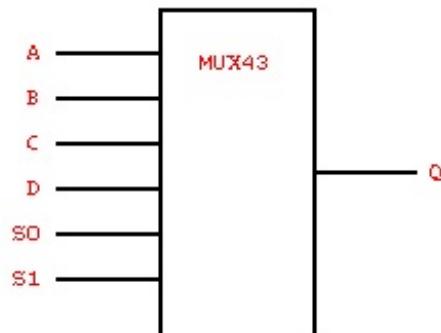
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	43
Cell Area	382.200 um ²
Equation	$Q = (((((A \& !S1) \& !S0) ((B \& !S1) \& S0)) ((D \& S1) \& S0)) ((C \& S1) \& !S0))"$
Type	Combinational
Input	A, B, C, D, S0, S1
Output	Q



State Table						
A	B	C	D	S0	S1	Q
L	-	-	-	L	L	L
H	-	-	-	L	L	H
-	L	-	-	H	L	L
-	H	-	-	H	L	H
-	-	L	-	L	H	L
-	-	H	-	L	H	H
-	-	-	L	H	H	L
-	-	-	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.25	0.83	1.17	1.85
	rise	0.20	1.01	0.17	1.01
B to Q	fall	0.24	0.83	1.19	1.86
	rise	0.19	1.00	0.12	0.97
C to Q	fall	0.25	0.83	1.12	1.79
	rise	0.21	1.01	0.23	1.08
D to Q	fall	0.25	0.83	1.19	1.86
	rise	0.19	0.99	0.13	0.97
S0 to Q	fall	0.35	0.92	1.05	1.73
	rise	0.35	1.16	1.18	1.98
S1 to Q	fall	0.17	0.74	1.03	1.72
	rise	0.20	1.01	0.96	1.79

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.09	0.73	0.17	0.78
	rise	0.08	1.27	0.14	1.31
B to Q	fall	0.09	0.73	0.16	0.78
	rise	0.08	1.27	0.14	1.31
C to Q	fall	0.09	0.73	0.17	0.78
	rise	0.08	1.27	0.14	1.31
D to Q	fall	0.09	0.73	0.17	0.78
	rise	0.08	1.27	0.14	1.31
S0 to Q	fall	0.08	0.72	0.15	0.79
	rise	0.08	1.27	0.13	1.33
S1 to Q	fall	0.08	0.72	0.14	0.79
	rise	0.08	1.27	0.14	1.33

Capacitance [fF]	
A	18.1540
B	18.3290
C	17.9310
D	18.3250
S0	67.7700
S1	21.4840

Leakage [pW]	
	4.23

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	639.37	748.89	2428.66	2692.62
	rise	394.05	416.57	1774.27	2210.68
B to Q	fall	638.89	750.67	2474.89	2741.41
	rise	386.71	406.45	1771.80	2248.67
C to Q	fall	751.83	875.23	2487.34	2800.65
	rise	275.86	280.16	1697.09	2070.78
D to Q	fall	746.19	873.49	2565.21	2861.89
	rise	274.09	277.07	1677.24	2125.27
S0 to Q	fall	1354.05	1469.77	5383.76	6226.61
	rise	1135.20	1153.24	4516.27	5777.49
S1 to Q	fall	396.08	503.52	2074.47	2465.29
	rise	373.95	387.39	1632.13	2258.11

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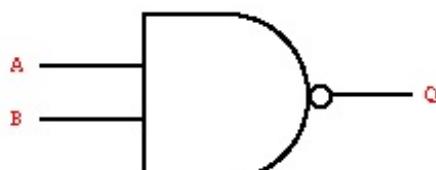
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	20
Cell Area	54.600 um ²
Equation	$Q = "!(B \& A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.05	0.47	-0.40	0.78
	rise	0.09	0.95	1.04	2.34
B to Q	fall	0.05	0.48	-0.53	0.48
	rise	0.11	0.97	1.23	2.41

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.05	0.65	0.57	1.39
	rise	0.11	1.40	0.51	1.83
B to Q	fall	0.05	0.65	0.56	1.24
	rise	0.14	1.43	0.53	1.84

Capacitance [fF]	
A	3.7180
B	4.2610

Leakage [pW]	
0.30	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	4.37	4.67	170.50	154.94
	rise	43.60	45.21	303.41	247.94
B to Q	fall	4.40	4.68	169.59	164.10
	rise	63.21	64.26	347.25	282.73

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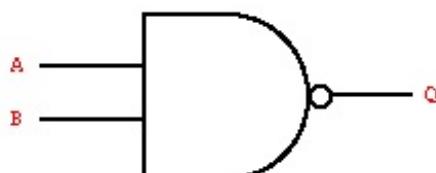
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	54.600 um ²
Equation	$Q = "!(B \& A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.04	0.45	-0.40	0.77
	rise	0.07	0.90	0.96	2.24
B to Q	fall	0.05	0.46	-0.53	0.48
	rise	0.10	0.92	1.16	2.31

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.04	0.62	0.54	1.37
	rise	0.09	1.33	0.48	1.77
B to Q	fall	0.04	0.62	0.54	1.22
	rise	0.12	1.36	0.50	1.78

Capacitance [fF]	
A	5.7160
B	6.8150

Leakage [pW]	
	0.38

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	4.03	4.65	346.79	325.48
	rise	73.96	77.73	620.13	509.90
B to Q	fall	4.04	4.67	346.25	344.28
	rise	111.39	113.16	708.24	579.76

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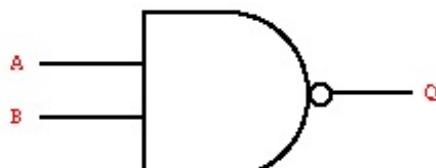
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	54.600 um ²
Equation	$Q = \neg(B \wedge A)$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.04	0.44	-0.41	0.75
	rise	0.07	0.87	0.93	2.21
B to Q	fall	0.04	0.44	-0.54	0.47
	rise	0.09	0.89	1.12	2.27

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.04	0.60	0.52	1.35
	rise	0.08	1.29	0.46	1.73
B to Q	fall	0.04	0.60	0.52	1.20
	rise	0.11	1.32	0.48	1.74

Capacitance [fF]	
A	9.7010
B	12.0040

Leakage [pW]	
	0.53

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	3.84	5.42	686.74	655.98
	rise	130.92	138.53	1233.21	1016.76
B to Q	fall	4.04	5.43	686.65	695.55
	rise	192.91	196.81	1399.49	1145.73

Databook Build Date: Wednesday Jun 18 17:26 2014

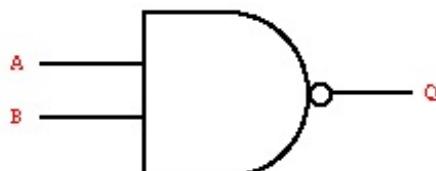
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	23
Cell Area	91.000 um ²
Equation	$Q = "!(B \& A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
A to Q	fall	0.03	0.44	-0.42	0.76
	rise	0.06	0.87	0.91	2.21
B to Q	fall	0.05	0.45	-0.54	0.47
	rise	0.10	0.91	1.15	2.29

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	15.00	480.00	15.00	480.00	
A to Q	fall	0.04	0.61	0.51	1.35
	rise	0.07	1.29	0.45	1.74
B to Q	fall	0.04	0.61	0.54	1.20
	rise	0.12	1.34	0.49	1.76

Capacitance [fF]	
A	15.3280
B	18.0870

Leakage [pW]	
	0.87

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	6.93	9.15	1019.54
	rise	165.86	180.84	1816.17
B to Q	fall	6.87	9.13	1030.40
	rise	327.51	336.59	2122.68
				1750.31

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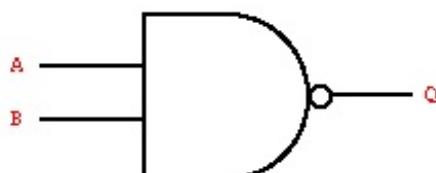
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	24
Cell Area	109.200 um ²
Equation	$Q = "!(B \& A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.03	0.44	-0.42	0.75
	rise	0.06	0.87	0.92	2.20
B to Q	fall	0.04	0.44	-0.55	0.46
	rise	0.08	0.89	1.11	2.27

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	0.04	0.60	0.51	1.35
	rise	0.07	1.29	0.45	1.73
B to Q	fall	0.04	0.60	0.51	1.20
	rise	0.10	1.32	0.47	1.73

Capacitance [fF]	
A	19.7660
B	24.5980

Leakage [pW]	
1.02	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	20.00	640.00	20.00	640.00	
A to Q	fall	1.32	4.48	1356.85	1303.23
	rise	244.70	262.98	2450.25	2019.08
B to Q	fall	1.44	4.50	1362.34	1386.18
	rise	369.43	374.41	2781.04	2274.30

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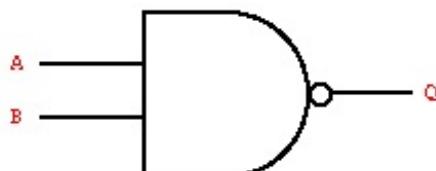
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	26
Cell Area	163.800 um ²
Equation	$Q = \neg(B \wedge A)$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	30.00	960.00	30.00	960.00	
A to Q	fall	0.03	0.44	-0.41	0.76
	rise	0.06	0.87	0.92	2.20
B to Q	fall	0.04	0.45	-0.54	0.47
	rise	0.09	0.90	1.13	2.28

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	30.00	960.00	30.00	960.00	
A to Q	fall	0.04	0.61	0.52	1.35
	rise	0.07	1.29	0.46	1.73
B to Q	fall	0.04	0.61	0.53	1.20
	rise	0.11	1.33	0.48	1.74

Capacitance [fF]	
A	28.9550
B	35.6000

Leakage [pW]	
1.70	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	30.00	960.00	30.00	960.00	
A to Q	fall	8.90	13.44	2049.03	1964.28
	rise	358.34	385.76	3671.97	3022.27
B to Q	fall	8.91	13.49	2066.64	2072.33
	rise	618.66	633.88	4230.27	3475.96

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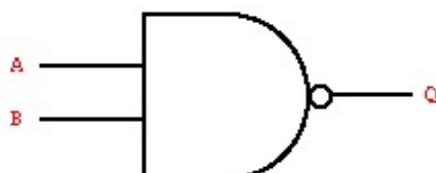
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	28
Cell Area	182.000 um ²
Equation	$Q = "!(B \& A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	-	H
H	H	L
-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	40.00	1280.00	40.00	1280.00	
A to Q	fall	0.03	0.44	-0.42	0.75
	rise	0.06	0.87	0.91	2.20
B to Q	fall	0.04	0.44	-0.55	0.46
	rise	0.08	0.89	1.11	2.27

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	40.00	1280.00	40.00	1280.00	
A to Q	fall	0.04	0.60	0.51	1.35
	rise	0.07	1.29	0.45	1.73
B to Q	fall	0.04	0.60	0.51	1.19
	rise	0.10	1.31	0.46	1.73

Capacitance [fF]	
A	39.5860
B	49.0690

Leakage [pW]	
	2.02

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	40.00	1280.00	40.00	1280.00	
A to Q	fall	2.52	9.02	2702.53	2607.46
	rise	468.33	501.18	4877.99	4015.64
B to Q	fall	2.72	9.05	2718.32	2772.90
	rise	717.27	734.37	5539.78	4531.17

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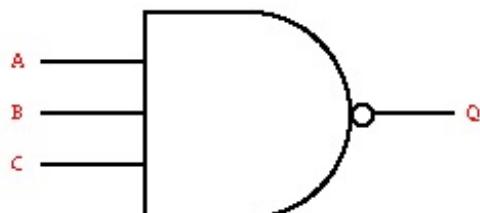
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	72.800 um ²
Equation	$Q = "!(C \& B) \& A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.05	0.44	-0.47
	rise	0.12	0.98	1.21
B to Q	fall	0.07	0.45	-0.54
	rise	0.16	1.02	1.38
C to Q	fall	0.07	0.46	-0.67
	rise	0.19	1.06	1.53

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.07	0.63	0.60
	rise	0.14	1.43	0.54
B to Q	fall	0.07	0.63	0.61
	rise	0.19	1.48	0.57
C to Q	fall	0.07	0.63	0.59
	rise	0.24	1.53	0.60

Capacitance [fF]	
A	3.7350
B	4.2570
C	5.0440

Leakage [pW]	
0.31	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	16.31	16.50	190.24
	rise	57.40	60.23	341.93
B to Q	fall	16.33	16.51	189.65
	rise	85.97	87.32	385.87
C to Q	fall	16.34	16.53	186.68
	rise	111.27	113.97	431.00

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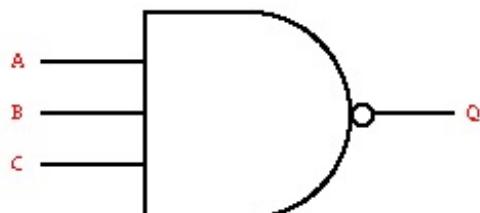
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	72.800 um ²
Equation	$Q = "!(C \& B) \& A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.04	0.42	-0.47
	rise	0.10	0.93	1.13
B to Q	fall	0.06	0.44	-0.55
	rise	0.14	0.96	1.31
C to Q	fall	0.07	0.44	-0.67
	rise	0.17	1.00	1.46

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.06	0.60	0.58
	rise	0.12	1.36	0.51
B to Q	fall	0.06	0.60	0.60
	rise	0.16	1.40	0.54
C to Q	fall	0.06	0.60	0.57
	rise	0.21	1.45	0.57

Capacitance [fF]	
A	5.9070
B	6.7940
C	8.3390

Leakage [pW]	
0.40	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	23.82	24.30	383.24
	rise	100.40	107.39	699.32
B to Q	fall	23.81	24.31	384.32
	rise	158.83	161.60	789.96
C to Q	fall	23.82	24.30	379.10
	rise	207.11	213.48	883.14

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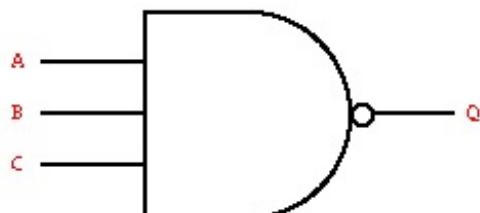
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	127.400 um ²
Equation	$Q = "!(C \& B) \& A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.04	0.42	-0.49	0.59
	rise	0.09	0.92	1.10	2.32
B to Q	fall	0.06	0.43	-0.57	0.41
	rise	0.13	0.95	1.29	2.39
C to Q	fall	0.06	0.44	-0.68	0.16
	rise	0.16	0.98	1.45	2.47

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.05	0.59	0.55	1.32
	rise	0.10	1.34	0.49	1.75
B to Q	fall	0.06	0.59	0.58	1.21
	rise	0.15	1.39	0.52	1.77
C to Q	fall	0.06	0.59	0.56	1.11
	rise	0.19	1.44	0.55	1.80

Capacitance [fF]	
A	11.4840
B	13.8400
C	17.2790

Leakage [pW]	
0.76	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	47.51	48.60	754.59	749.89
	rise	165.39	177.76	1362.93	1130.49
B to Q	fall	47.48	48.63	760.75	765.44
	rise	281.26	286.16	1544.25	1289.34
C to Q	fall	47.60	48.61	753.59	798.95
	rise	377.43	389.95	1731.96	1449.20

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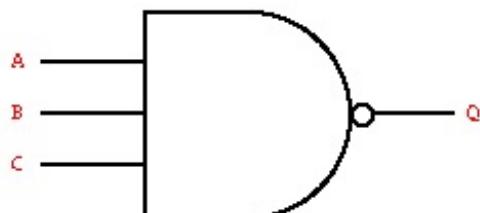
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	33
Cell Area	127.400 um ²
Equation	$Q = "!(C \& B) \& A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	0.04	0.41	-0.49
	rise	0.09	0.89	1.09
B to Q	fall	0.05	0.42	-0.56
	rise	0.12	0.92	1.26
C to Q	fall	0.06	0.42	-0.68
	rise	0.15	0.95	1.42

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	0.05	0.58	0.55
	rise	0.10	1.31	0.48
B to Q	fall	0.05	0.58	0.57
	rise	0.14	1.35	0.51
C to Q	fall	0.05	0.58	0.55
	rise	0.18	1.39	0.53

Capacitance [fF]	
A	15.0590
B	17.4870
C	22.5080

Leakage [pW]	
0.82	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	61.04	62.86	1140.04
	rise	269.00	288.74	2089.73
B to Q	fall	61.14	62.88	1145.68
	rise	423.04	429.53	2346.65
C to Q	fall	61.38	62.82	1134.90
	rise	554.23	570.51	2619.08

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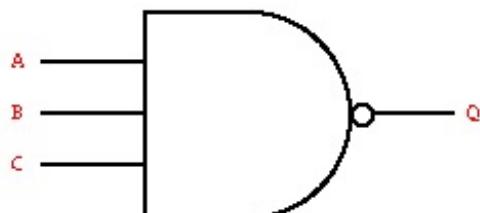
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	34
Cell Area	163.800 um ²
Equation	$Q = "!(C \& B) \& A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	-	-	H
H	H	H	L
-	L	-	H
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	0.04	0.41	-0.48
	rise	0.09	0.89	1.09
B to Q	fall	0.05	0.42	-0.56
	rise	0.12	0.92	1.26
C to Q	fall	0.06	0.43	-0.67
	rise	0.15	0.95	1.41

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	0.05	0.58	0.56
	rise	0.10	1.31	0.49
B to Q	fall	0.06	0.58	0.57
	rise	0.14	1.35	0.51
C to Q	fall	0.06	0.58	0.55
	rise	0.18	1.39	0.54

Capacitance [fF]	
A	20.3600
B	23.1720
C	29.8340

Leakage [pW]	
1.05	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		20.00	640.00	20.00
A to Q	fall	89.90	92.14	1534.00
	rise	356.99	384.74	2786.55
B to Q	fall	90.00	92.13	1538.28
	rise	561.51	571.44	3129.00
C to Q	fall	89.88	92.16	1526.01
	rise	735.85	753.38	3489.81

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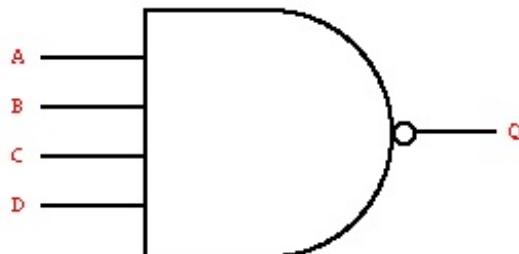
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	40
Cell Area	91.000 um ²
Equation	$Q = "!(D \& C) \& B) \& A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	-	H
H	H	H	H	L
-	L	-	-	H
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	0.05	0.42	-0.50
	rise	0.15	1.01	1.33
B to Q	fall	0.08	0.44	-0.54
	rise	0.20	1.06	1.50
C to Q	fall	0.09	0.46	-0.62
	rise	0.25	1.12	1.64
D to Q	fall	0.10	0.46	-0.73
	rise	0.30	1.16	1.77
				2.74

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	0.09	0.62	0.62
	rise	0.18	1.46	0.57
B to Q	fall	0.09	0.62	0.65
	rise	0.24	1.53	0.61
C to Q	fall	0.09	0.62	0.65
	rise	0.30	1.60	0.66
D to Q	fall	0.09	0.62	0.60
	rise	0.36	1.66	0.69
				1.98

Capacitance [fF]	
A	3.8440
B	4.2860
C	4.7690
D	5.6910

Leakage [pW]	
	0.29

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	2.50	80.00	2.50	80.00
A to Q	fall	28.11	28.35	207.96
	rise	69.80	73.97	368.72
B to Q	fall	28.19	28.33	208.18
	rise	108.93	110.83	417.24
C to Q	fall	28.23	28.34	205.88
	rise	145.43	148.14	465.60
D to Q	fall	28.13	28.37	197.73
	rise	177.16	183.21	513.15
				444.83

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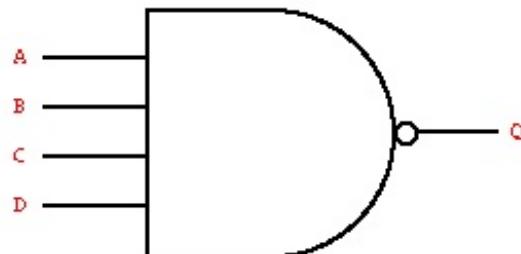
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	91.000 um ²
Equation	$Q = "!(D \& C) \& B) \& A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	-	H
H	H	H	H	L
-	L	-	-	H
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.05	0.41	-0.50
	rise	0.13	0.96	1.25
B to Q	fall	0.07	0.43	-0.55
	rise	0.18	1.00	1.42
C to Q	fall	0.08	0.44	-0.63
	rise	0.23	1.05	1.57
D to Q	fall	0.09	0.45	-0.73
	rise	0.26	1.09	1.69

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.60	0.61
	rise	0.15	1.39	0.54
B to Q	fall	0.08	0.60	0.64
	rise	0.21	1.45	0.58
C to Q	fall	0.08	0.60	0.64
	rise	0.26	1.51	0.62
D to Q	fall	0.08	0.60	0.59
	rise	0.32	1.56	0.65

Capacitance [fF]	
A	6.2500
B	7.2620
C	8.1000
D	9.9530

Leakage [pW]	
	0.38

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	43.48	43.89	417.14
	rise	132.37	140.75	761.39
B to Q	fall	43.57	43.92	419.08
	rise	202.42	205.34	854.47
C to Q	fall	43.62	43.93	415.78
	rise	273.47	278.36	952.62
D to Q	fall	43.50	43.93	401.21
	rise	328.73	340.96	1044.40

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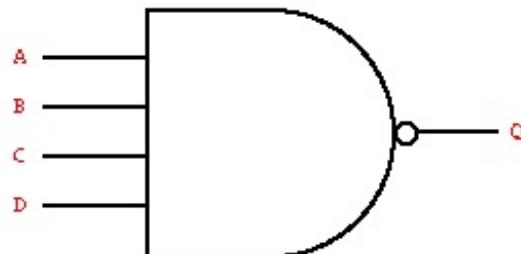
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	42
Cell Area	145.600 um ²
Equation	$Q = "!(D \& C) \& B) \& A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	-	H
H	H	H	H	L
-	L	-	-	H
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.43	-0.76	-0.02
	rise	0.23	1.04	1.64	2.58
B to Q	fall	0.07	0.43	-0.66	0.19
	rise	0.20	1.00	1.51	2.50
C to Q	fall	0.06	0.42	-0.58	0.36
	rise	0.16	0.96	1.36	2.42
D to Q	fall	0.04	0.40	-0.54	0.50
	rise	0.11	0.92	1.19	2.35

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.58	0.58	1.04
	rise	0.27	1.49	0.60	1.83
B to Q	fall	0.07	0.58	0.62	1.13
	rise	0.22	1.44	0.57	1.79
C to Q	fall	0.07	0.58	0.61	1.21
	rise	0.17	1.39	0.53	1.76
D to Q	fall	0.07	0.58	0.57	1.29
	rise	0.12	1.33	0.49	1.72

Capacitance [fF]	
A	18.8990
B	14.9980
C	12.9620
D	11.8810

Leakage [pW]	
	0.60

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	36.01	36.98	762.47	831.44
	rise	613.53	638.08	2070.20	1785.51
B to Q	fall	36.13	36.98	790.20	810.72
	rise	504.49	517.47	1882.52	1611.68
C to Q	fall	36.02	37.01	793.02	791.50
	rise	376.23	383.40	1691.08	1439.45
D to Q	fall	35.69	36.99	778.34	785.31
	rise	233.69	253.83	1501.45	1268.12

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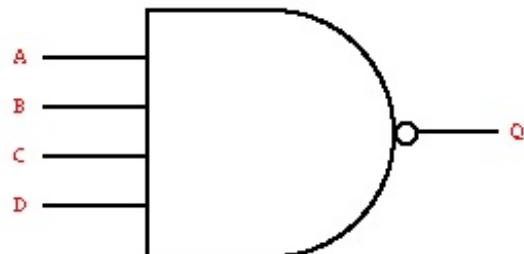
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	43
Cell Area	200.200 um ²
Equation	$Q = "!(D \& C) \& B) \& A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	-	-	-	H
H	H	H	H	L
-	L	-	-	H
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	0.07	0.42	-0.77
	rise	0.23	1.05	1.65
B to Q	fall	0.07	0.42	-0.67
	rise	0.20	1.01	1.52
C to Q	fall	0.06	0.41	-0.59
	rise	0.16	0.97	1.38
D to Q	fall	0.04	0.39	-0.56
	rise	0.11	0.92	1.20

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	0.07	0.57	0.58
	rise	0.28	1.51	0.60
B to Q	fall	0.07	0.57	0.61
	rise	0.22	1.45	0.57
C to Q	fall	0.07	0.57	0.61
	rise	0.17	1.40	0.53
D to Q	fall	0.06	0.57	0.57
	rise	0.12	1.34	0.48

Capacitance [fF]	
A	27.9850
B	22.3560
C	19.5520
D	17.5460

Leakage [pW]	
	0.87

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		15.00	480.00	15.00
A to Q	fall	59.00	60.32	1134.54
	rise	921.14	961.62	3111.57
B to Q	fall	58.96	60.33	1178.67
	rise	755.76	775.20	2828.62
C to Q	fall	59.03	60.30	1183.71
	rise	560.09	572.18	2542.11
D to Q	fall	58.36	60.31	1161.84
	rise	342.34	375.97	2255.14

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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	20
Cell Area	54.600 um ²
Equation	$Q = "!(B \mid A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
H	-	L
-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.09	0.58	0.25	1.28
	rise	0.11	0.90	0.47	1.61
B to Q	fall	0.06	0.55	0.00	1.19
	rise	0.08	0.88	0.71	1.99

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.09	0.75	0.73	1.51
	rise	0.13	1.32	0.65	1.72
B to Q	fall	0.06	0.71	0.57	1.47
	rise	0.13	1.32	0.58	1.79

Capacitance [fF]	
A	4.6160
B	3.8520

Leakage [pW]	
	0.24

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	20.46	22.79	266.16	213.91
	rise	69.36	70.09	357.41	303.69
B to Q	fall	6.00	6.78	202.75	177.19
	rise	49.21	49.88	314.75	264.08

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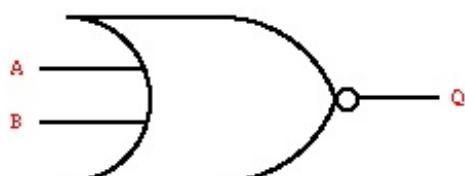
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	54.600 um ²
Equation	$Q = "!(B \mid A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
H	-	L
-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	0.08	0.60	0.29
	rise	0.09	0.87	0.38
B to Q	fall	0.06	0.58	0.03
	rise	0.07	0.85	0.61

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	0.08	0.78	0.70
	rise	0.11	1.27	0.62
B to Q	fall	0.05	0.75	0.54
	rise	0.11	1.27	0.55

Capacitance [fF]	
A	7.3600
B	5.7590

Leakage [pW]	
0.31	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	5.00	160.00	5.00	160.00
A to Q	fall	33.22	37.74	514.29
	rise	120.00	121.29	670.65
B to Q	fall	7.56	9.59	392.64
	rise	79.55	80.85	586.60

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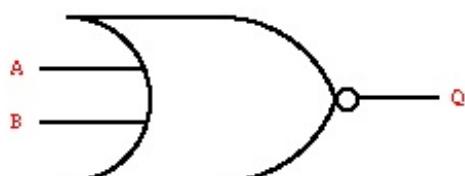
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	72.800 um ²
Equation	$Q = "!(B \mid A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
H	-	L
-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.58	0.27
	rise	0.09	0.86	0.36
B to Q	fall	0.06	0.56	0.02
	rise	0.07	0.84	0.60

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.75	0.68
	rise	0.10	1.26	0.60
B to Q	fall	0.05	0.73	0.52
	rise	0.10	1.26	0.54

Capacitance [fF]	
A	13.2950
B	10.5550

Leakage [pW]	
0.41	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	45.15	49.85	1005.54
	rise	230.12	232.11	1343.69
B to Q	fall	20.70	24.61	780.02
	rise	147.80	151.76	1162.02

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	23
Cell Area	91.000 um ²
Equation	$Q = "!(B \mid A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
H	-	L
-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	0.07	0.57	0.24
	rise	0.08	0.86	0.36
B to Q	fall	0.05	0.55	-0.01
	rise	0.07	0.84	0.59

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	0.07	0.73	0.66
	rise	0.09	1.25	0.58
B to Q	fall	0.04	0.71	0.51
	rise	0.09	1.25	0.51

Capacitance [fF]	
A	20.2430
B	15.0710

Leakage [pW]	
0.53	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	15.00	480.00	15.00	480.00
A to Q	fall	25.23	32.55	1455.77
	rise	353.13	354.83	2023.51
B to Q	fall	0.00	0.00	1114.55
	rise	230.48	234.77	1744.64

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	24
Cell Area	109.200 um ²
Equation	$Q = "!(B \mid A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
H	-	L
-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	20.00	640.00	20.00	640.00
A to Q	fall	0.06	0.56	0.22
	rise	0.08	0.85	0.33
B to Q	fall	0.04	0.54	-0.04
	rise	0.06	0.83	0.56
				1.30
				1.52
				1.21
				1.90

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	20.00	640.00	20.00	640.00
A to Q	fall	0.06	0.72	0.64
	rise	0.08	1.24	0.56
B to Q	fall	0.04	0.70	0.48
	rise	0.08	1.24	0.48
				1.48
				1.65
				1.44
				1.73

Capacitance [fF]	
A	26.9550
B	19.6620

Leakage [pW]	
	0.62

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]	20.00	640.00	20.00	640.00
A to Q	fall	-0.01	0.40	1888.57
	rise	449.89	453.75	2685.51
B to Q	fall	0.00	0.00	1424.76
	rise	284.08	293.13	2304.78
				1505.72
				2288.43
				1274.93
				1949.76

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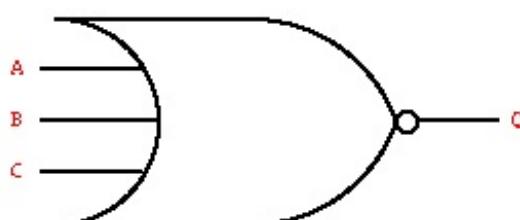
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	72.800 um ²
Equation	$Q = "!(C \mid B) \mid A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
H	-	-	L
-	H	-	L
-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.11	0.59	0.23	1.31
	rise	0.14	0.91	0.78	1.94
B to Q	fall	0.14	0.63	0.43	1.40
	rise	0.18	0.95	0.62	1.69
C to Q	fall	0.16	0.66	0.61	1.49
	rise	0.20	0.97	0.36	1.38

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.11	0.76	0.68	1.50
	rise	0.23	1.39	0.73	1.85
B to Q	fall	0.14	0.80	0.80	1.54
	rise	0.23	1.39	0.78	1.79
C to Q	fall	0.18	0.83	0.94	1.60
	rise	0.23	1.39	0.84	1.81

Capacitance [fF]	
A	4.2220
B	4.9560
C	5.7190

Leakage [pW]	
0.21	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	25.92	26.72	251.74	216.21
	rise	92.42	93.27	381.05	323.93
B to Q	fall	37.68	38.69	295.13	239.89
	rise	122.53	123.48	418.96	361.31
C to Q	fall	46.33	49.84	350.96	269.97
	rise	151.79	152.71	477.26	420.07

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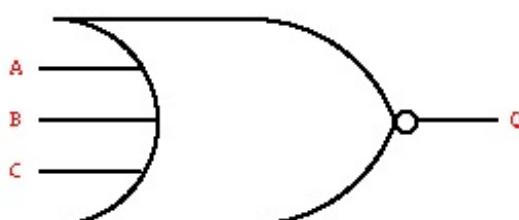
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	72.800 um ²
Equation	$Q = "!(C \mid B) \mid A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
H	-	-	L
-	H	-	L
-	-	H	L

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.59	0.15
	rise	0.08	0.85	0.57
B to Q	fall	0.11	0.63	0.38
	rise	0.12	0.89	0.44
C to Q	fall	0.13	0.66	0.58
	rise	0.14	0.90	0.20

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.06	0.76	0.55
	rise	0.15	1.29	0.60
B to Q	fall	0.10	0.80	0.69
	rise	0.15	1.29	0.68
C to Q	fall	0.14	0.84	0.85
	rise	0.15	1.29	0.75

Capacitance [fF]	
A	6.4120
B	7.8770
C	9.6690

Leakage [pW]	
0.27	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	3.17	6.07	428.45
	rise	116.69	119.17	660.08
B to Q	fall	26.59	29.48	518.81
	rise	177.77	179.14	737.46
C to Q	fall	42.62	51.12	633.04
	rise	237.15	238.43	852.49

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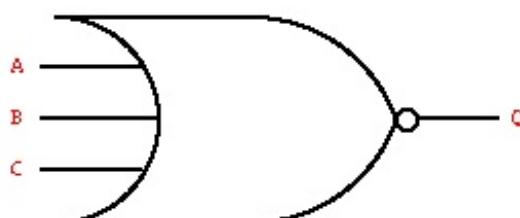
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	32
Cell Area	91.000 um ²
Equation	$Q = "!(C \mid B) \mid A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
H	-	-	L
-	H	-	L
-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.11	0.63	0.55	1.49
	rise	0.13	0.89	0.17	1.25
B to Q	fall	0.10	0.60	0.35	1.40
	rise	0.11	0.87	0.41	1.57
C to Q	fall	0.07	0.57	0.11	1.30
	rise	0.07	0.83	0.54	1.82

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.12	0.80	0.82	1.56
	rise	0.13	1.27	0.72	1.71
B to Q	fall	0.09	0.77	0.66	1.50
	rise	0.13	1.27	0.65	1.69
C to Q	fall	0.05	0.73	0.51	1.46
	rise	0.13	1.27	0.56	1.75

Capacitance [fF]	
A	18.2780
B	14.2690
C	11.0760

Leakage [pW]	
0.36	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	60.36	78.44	1240.68	945.15
	rise	451.26	455.30	1694.81	1488.69
B to Q	fall	30.84	37.02	1005.87	828.54
	rise	331.82	335.58	1456.48	1259.61
C to Q	fall	0.00	0.00	820.72	737.34
	rise	207.95	214.38	1297.14	1110.69

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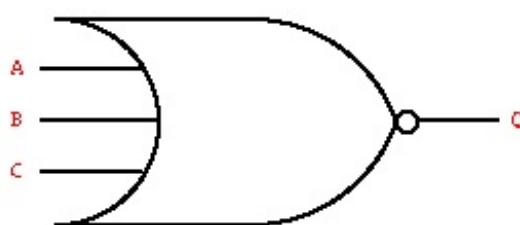
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	33
Cell Area	127.400 um ²
Equation	$Q = "!(C \mid B) \mid A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
H	-	-	L
-	H	-	L
-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.11	0.64	0.55	1.50
	rise	0.12	0.88	0.15	1.24
B to Q	fall	0.09	0.61	0.35	1.41
	rise	0.11	0.87	0.39	1.55
C to Q	fall	0.06	0.57	0.10	1.31
	rise	0.06	0.82	0.51	1.80

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	0.12	0.81	0.82	1.57
	rise	0.13	1.26	0.71	1.70
B to Q	fall	0.08	0.77	0.65	1.51
	rise	0.13	1.26	0.64	1.69
C to Q	fall	0.05	0.74	0.50	1.46
	rise	0.12	1.26	0.54	1.74

Capacitance [fF]	
A	27.3200
B	21.0930
C	16.2830

Leakage [pW]	
0.58	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		15.00	480.00	15.00	480.00
A to Q	fall	63.06	89.87	1839.90	1394.71
	rise	669.24	676.11	2534.57	2232.42
B to Q	fall	20.57	29.51	1492.09	1229.99
	rise	488.38	495.68	2178.91	1888.26
C to Q	fall	0.00	0.00	1205.72	1085.80
	rise	303.96	312.89	1935.32	1663.87

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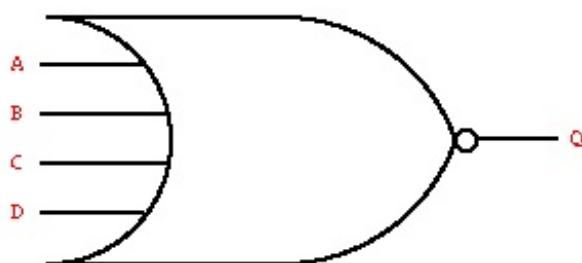
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	40
Cell Area	72.800 um ²
Equation	$Q = "!"((D \mid C) \mid B) \mid A)$ "
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	H
H	-	-	-	L
-	H	-	-	L
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.20	0.72	0.81	1.63
	rise	0.24	1.00	0.21	1.22
B to Q	fall	0.18	0.69	0.66	1.54
	rise	0.22	0.99	0.44	1.45
C to Q	fall	0.16	0.65	0.49	1.45
	rise	0.18	0.95	0.60	1.68
D to Q	fall	0.10	0.59	0.24	1.33
	rise	0.09	0.86	0.67	1.84

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.23	0.90	1.05	1.67
	rise	0.25	1.39	0.93	1.84
B to Q	fall	0.19	0.85	0.91	1.60
	rise	0.25	1.39	0.87	1.80
C to Q	fall	0.15	0.81	0.77	1.53
	rise	0.25	1.39	0.82	1.81
D to Q	fall	0.09	0.75	0.61	1.46
	rise	0.23	1.39	0.71	1.84

Capacitance [fF]	
A	6.7140
B	5.9870
C	5.3490
D	4.4060

Leakage [pW]	
	0.17

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	60.18	70.31	392.93	304.20
	rise	209.07	210.62	541.92	485.25
B to Q	fall	51.26	57.17	344.35	278.33
	rise	169.86	171.42	484.34	424.90
C to Q	fall	38.64	41.16	298.31	252.59
	rise	130.60	132.17	432.18	372.73
D to Q	fall	9.28	9.62	241.19	214.06
	rise	90.31	92.05	396.00	339.96

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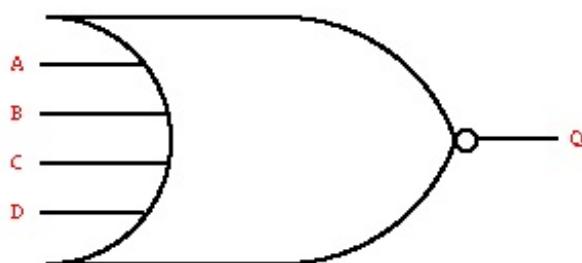
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	91.000 um ²
Equation	$Q = "!"(((D \mid C) \mid B) \mid A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	H
H	-	-	-	L
-	H	-	-	L
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.19	0.74	0.84	1.69
	rise	0.20	0.97	0.12	1.14
B to Q	fall	0.17	0.71	0.67	1.60
	rise	0.19	0.95	0.34	1.38
C to Q	fall	0.14	0.66	0.49	1.50
	rise	0.15	0.91	0.49	1.61
D to Q	fall	0.10	0.61	0.26	1.40
	rise	0.08	0.84	0.56	1.78

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.22	0.92	1.00	1.68
	rise	0.21	1.34	0.87	1.79
B to Q	fall	0.17	0.88	0.86	1.61
	rise	0.21	1.34	0.83	1.76
C to Q	fall	0.13	0.83	0.71	1.54
	rise	0.21	1.34	0.77	1.77
D to Q	fall	0.08	0.78	0.56	1.48
	rise	0.19	1.34	0.66	1.81

Capacitance [fF]	
A	12.0360
B	9.8640
C	8.6710
D	6.5660

Leakage [pW]	
	0.21

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	88.24	105.79	736.47	554.41
	rise	386.76	389.85	1015.28	913.77
B to Q	fall	70.48	79.41	640.65	504.85
	rise	307.49	310.60	905.44	796.97
C to Q	fall	42.80	45.88	546.33	452.10
	rise	227.05	231.25	803.73	695.41
D to Q	fall	13.55	14.94	461.08	407.85
	rise	145.94	149.69	722.51	620.23

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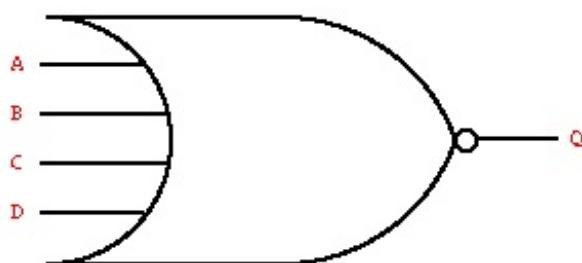
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	42
Cell Area	163.800 um ²
Equation	$Q = "!(((D \mid C) \mid B) \mid A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	H
H	-	-	-	L
-	H	-	-	L
-	-	H	-	L
-	-	-	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.19	0.74	0.85	1.70
	rise	0.20	0.94	0.09	1.10
B to Q	fall	0.17	0.71	0.69	1.61
	rise	0.18	0.92	0.31	1.34
C to Q	fall	0.14	0.66	0.50	1.51
	rise	0.14	0.88	0.46	1.57
D to Q	fall	0.09	0.61	0.26	1.40
	rise	0.08	0.82	0.53	1.74

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.22	0.92	0.99	1.67
	rise	0.20	1.30	0.86	1.76
B to Q	fall	0.17	0.87	0.84	1.60
	rise	0.20	1.30	0.82	1.73
C to Q	fall	0.12	0.82	0.70	1.53
	rise	0.20	1.30	0.76	1.74
D to Q	fall	0.08	0.77	0.55	1.48
	rise	0.18	1.30	0.65	1.78

Capacitance [fF]	
A	23.4560
B	19.7700
C	16.8210
D	13.3160

Leakage [pW]	
	0.37

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	165.74	199.79	1489.06	1121.56
	rise	776.55	783.63	2047.22	1849.23
B to Q	fall	130.80	148.71	1289.49	1016.10
	rise	614.37	620.60	1821.70	1612.61
C to Q	fall	77.00	83.00	1104.46	917.28
	rise	450.14	457.66	1615.46	1403.93
D to Q	fall	20.10	23.00	925.15	823.39
	rise	282.96	291.63	1447.58	1248.91

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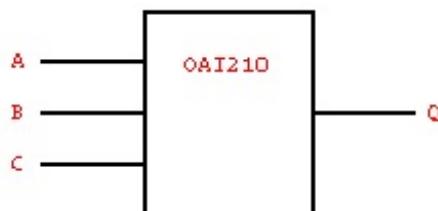
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	210
Cell Area	72.800 um ²
Equation	$Q = \neg(C \& (A \mid B))$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	H
H	-	H	L
-	H	H	L
-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.08	0.51	-0.19	0.66
	rise	0.15	0.94	0.86	1.84
B to Q	fall	0.07	0.49	-0.38	0.58
	rise	0.13	0.92	1.12	2.20
C to Q	fall	0.07	0.49	-0.28	0.82
	rise	0.10	0.97	1.13	2.38

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.08	0.68	0.73	1.32
	rise	0.17	1.36	0.68	1.72
B to Q	fall	0.06	0.65	0.58	1.26
	rise	0.17	1.36	0.58	1.76
C to Q	fall	0.08	0.68	0.62	1.41
	rise	0.17	1.46	0.66	1.90

Capacitance [fF]	
A	5.5790
B	4.8590
C	4.0300

Leakage [pW]	
0.35	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	10.62	11.73	293.84	264.42
	rise	103.67	105.00	498.98	422.03
B to Q	fall	3.65	4.52	216.03	219.50
	rise	83.76	85.60	427.49	359.82
C to Q	fall	12.84	13.39	177.93	164.23
	rise	48.89	50.58	316.94	258.52

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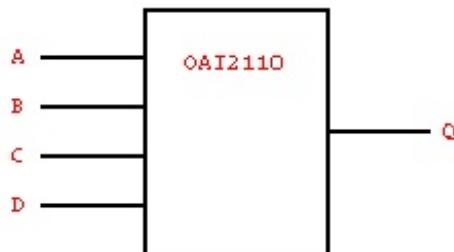
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2110
Cell Area	91.000 um ²
Equation	$Q = "!(D \& C) \& (B A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	H	L
-	H	H	H	L
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.07	0.46	-0.09
	rise	0.14	0.94	0.81
B to Q	fall	0.06	0.44	-0.30
	rise	0.12	0.92	0.72
C to Q	fall	0.10	0.49	-0.42
	rise	0.24	1.10	0.48
D to Q	fall	0.11	0.49	-0.56
	rise	0.26	1.13	0.23
				2.67

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	0.10	0.66	0.79
	rise	0.16	1.35	0.66
B to Q	fall	0.08	0.64	0.62
	rise	0.16	1.35	0.57
C to Q	fall	0.10	0.66	0.72
	rise	0.31	1.60	0.73
D to Q	fall	0.10	0.66	0.67
	rise	0.35	1.64	0.74
				2.00

Capacitance [fF]	
A	4.8300
B	4.6860
C	4.3890
D	5.0040

Leakage [pW]	
	0.38

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		2.50	80.00	2.50
A to Q	fall	22.87	23.56	316.39
	rise	91.04	93.78	484.30
B to Q	fall	15.65	16.35	239.69
	rise	71.07	73.73	416.35
C to Q	fall	24.83	25.23	200.25
	rise	129.48	131.67	425.60
D to Q	fall	24.83	25.23	186.87
	rise	150.12	153.37	363.07
				196.75
				466.57
				399.06

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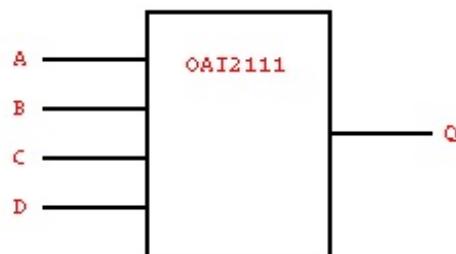
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2111
Cell Area	91.000 um ²
Equation	$Q = "!(D \& C) \& (B A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	H	L
-	H	H	H	L
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.06	0.45	-0.10
	rise	0.12	0.90	0.75
B to Q	fall	0.05	0.43	-0.32
	rise	0.11	0.89	1.01
C to Q	fall	0.09	0.47	-0.43
	rise	0.19	1.02	1.41
D to Q	fall	0.09	0.48	-0.57
	rise	0.22	1.04	1.55

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.09	0.64	0.76
	rise	0.13	1.30	0.63
B to Q	fall	0.07	0.62	0.58
	rise	0.13	1.30	0.53
C to Q	fall	0.09	0.64	0.68
	rise	0.25	1.49	0.67
D to Q	fall	0.09	0.64	0.64
	rise	0.29	1.53	0.69

Capacitance [fF]	
A	7.9560
B	7.5080
C	6.7370
D	8.1890

Leakage [pW]	
	0.48

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	34.86	36.48	618.62
	rise	160.57	166.17	950.57
B to Q	fall	22.37	23.98	462.03
	rise	119.84	126.36	809.33
C to Q	fall	40.19	41.18	404.99
	rise	214.88	218.77	839.84
D to Q	fall	40.23	41.19	397.96
	rise	255.32	261.50	925.91

Databook Build Date: Wednesday Jun 18 17:26 2014

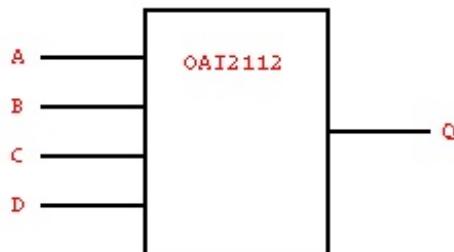
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	2112
Cell Area	145.600 um ²
Equation	$Q = "!(D \& C) \& (B A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	H	L
-	H	H	H	L
-	-	L	-	H
-	-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	0.06	0.44	-0.14
	rise	0.11	0.89	0.71
B to Q	fall	0.04	0.42	-0.37
	rise	0.09	0.87	0.97
C to Q	fall	0.08	0.46	-0.47
	rise	0.17	0.98	1.37
D to Q	fall	0.08	0.46	-0.61
	rise	0.20	1.01	1.51
				2.51

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	0.08	0.62	0.73
	rise	0.11	1.28	0.60
B to Q	fall	0.06	0.60	0.55
	rise	0.11	1.28	0.49
C to Q	fall	0.08	0.62	0.66
	rise	0.22	1.44	0.64
D to Q	fall	0.08	0.62	0.63
	rise	0.26	1.48	0.65
				1.12
				1.86

Capacitance [fF]	
A	15.9490
B	14.3310
C	12.9910
D	15.5580

Leakage [pW]	
	0.94

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		10.00	320.00	10.00
A to Q	fall	28.05	31.77	1185.56
	rise	297.07	311.76	1081.68
B to Q	fall	2.84	6.71	869.46
	rise	216.28	231.38	907.94
C to Q	fall	39.21	41.27	1598.43
	rise	394.03	402.31	1366.76
D to Q	fall	39.28	41.25	1664.56
	rise	476.42	489.36	1412.27
				752.57
				790.26
				1562.11

Databook Build Date: Wednesday Jun 18 17:26 2014

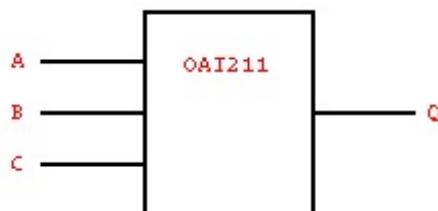
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	211
Cell Area	72.800 um ²
Equation	$Q = \neg(C \& (A \mid B))$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	H
H	-	H	L
-	H	H	L
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.08	0.49	-0.20
	rise	0.14	0.92	0.83
B to Q	fall	0.06	0.48	-0.39
	rise	0.12	0.90	1.09
C to Q	fall	0.06	0.47	-0.28
	rise	0.09	0.92	1.05

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.07	0.65	0.71
	rise	0.15	1.32	0.65
B to Q	fall	0.05	0.63	0.56
	rise	0.15	1.32	0.55
C to Q	fall	0.07	0.65	0.60
	rise	0.15	1.39	0.63

Capacitance [fF]	
A	9.1060
B	7.9950
C	6.0390

Leakage [pW]	
0.46	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	14.78	16.87	582.16
	rise	196.50	199.39	995.62
B to Q	fall	2.24	4.35	423.47
	rise	156.40	159.60	847.65
C to Q	fall	20.43	21.56	363.38
	rise	87.31	91.03	650.72

Databook Build Date: Wednesday Jun 18 17:26 2014

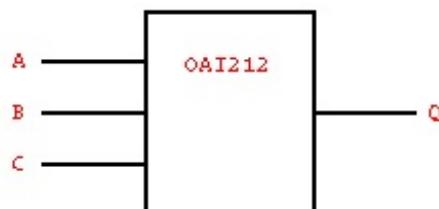
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	212
Cell Area	72.800 um ²
Equation	$Q = \neg(C \& (A \mid B))$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	-	H
H	-	H	L
-	H	H	L
-	-	L	H

Propagation Delay [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.07	0.28	-0.17
	rise	0.12	0.51	0.76
B to Q	fall	0.06	0.27	-0.37
	rise	0.10	0.49	1.01
C to Q	fall	0.06	0.27	-0.28
	rise	0.08	0.48	0.99

Output Transition [ns]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.06	0.36	0.69
	rise	0.13	0.71	0.63
B to Q	fall	0.04	0.34	0.53
	rise	0.13	0.71	0.52
C to Q	fall	0.06	0.36	0.57
	rise	0.13	0.73	0.61

Capacitance [fF]	
A	16.0120
B	14.3740
C	10.6600

Leakage [pW]	
0.64	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01		4.00
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	59.34	63.55	1164.15
	rise	356.15	362.26	1901.12
B to Q	fall	35.51	39.68	852.46
	rise	275.85	280.64	1612.58
C to Q	fall	71.19	73.41	749.70
	rise	152.25	160.62	1292.32

Databook Build Date: Wednesday Jun 18 17:26 2014

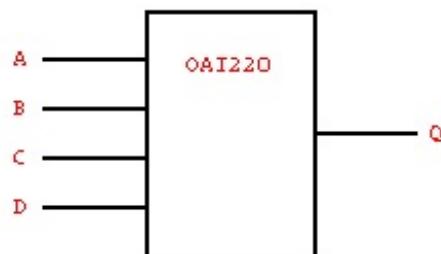
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	220
Cell Area	91.000 um ²
Equation	$Q = "!(D \mid C) \& (B \mid A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	-	L
H	-	-	H	L
-	H	H	-	L
-	H	-	H	L
-	-	L	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.07	0.50	-0.12	0.92
	rise	0.11	0.91	0.97	2.15
B to Q	fall	0.09	0.52	0.09	1.02
	rise	0.12	0.92	0.72	1.79
C to Q	fall	0.10	0.52	-0.27	0.63
	rise	0.17	0.97	1.23	2.27
D to Q	fall	0.11	0.54	-0.10	0.71
	rise	0.19	0.99	0.96	1.91

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.08	0.68	0.63	1.41
	rise	0.18	1.37	0.67	1.80
B to Q	fall	0.10	0.70	0.78	1.46
	rise	0.18	1.37	0.73	1.75
C to Q	fall	0.08	0.68	0.66	1.27
	rise	0.26	1.44	0.72	1.85
D to Q	fall	0.10	0.70	0.79	1.33
	rise	0.26	1.44	0.80	1.80

Capacitance [fF]	
A	4.1570
B	4.9400
C	4.3930
D	5.0170

Leakage [pW]	
	0.43

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	8.45	9.45	220.23	216.13
	rise	60.94	62.92	384.50	324.63
B to Q	fall	15.27	16.63	288.04	253.11
	rise	80.97	82.55	445.78	379.65
C to Q	fall	8.37	9.45	220.93	218.45
	rise	114.07	116.70	458.28	391.73
D to Q	fall	15.47	16.63	294.83	262.54
	rise	133.85	136.11	527.74	454.10

Databook Build Date: Wednesday Jun 18 17:26 2014

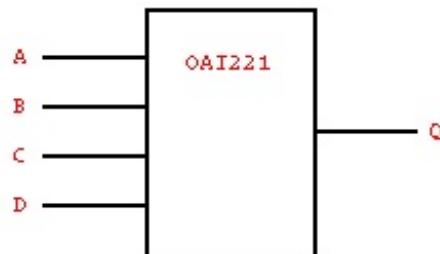
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	221
Cell Area	91.000 um ²
Equation	$Q = "!(D \mid C) \& (B \mid A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	-	L
H	-	-	H	L
-	H	H	-	L
-	H	-	H	L
-	-	L	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.07	0.48	-0.14	0.90
	rise	0.10	0.88	0.93	2.11
B to Q	fall	0.08	0.50	0.07	0.99
	rise	0.11	0.90	0.69	1.76
C to Q	fall	0.09	0.50	-0.29	0.61
	rise	0.15	0.93	1.17	2.22
D to Q	fall	0.10	0.52	-0.12	0.69
	rise	0.17	0.95	0.92	1.86

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.07	0.65	0.60	1.39
	rise	0.16	1.33	0.64	1.76
B to Q	fall	0.09	0.67	0.76	1.44
	rise	0.16	1.33	0.71	1.71
C to Q	fall	0.07	0.65	0.62	1.25
	rise	0.23	1.39	0.68	1.80
D to Q	fall	0.09	0.67	0.76	1.31
	rise	0.23	1.39	0.76	1.76

Capacitance [fF]	
A	7.0130
B	8.4120
C	7.5570
D	8.7880

Leakage [pW]	
	0.55

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	11.43	13.66	430.35	431.47
	rise	110.43	114.92	761.69	644.34
B to Q	fall	23.63	26.15	567.97	506.00
	rise	151.24	154.72	889.03	757.79
C to Q	fall	11.28	13.64	433.84	438.82
	rise	201.53	206.09	896.01	764.64
D to Q	fall	23.75	26.15	584.57	528.34
	rise	242.11	245.88	1040.14	893.14

Databook Build Date: Wednesday Jun 18 17:26 2014

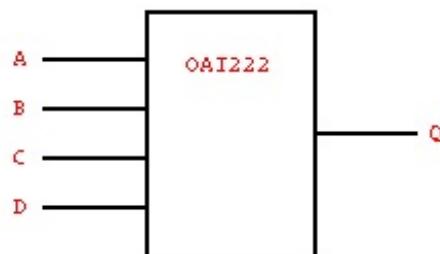
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	222
Cell Area	91.000 um ²
Equation	$Q = "!(D \mid C) \& (B \mid A)"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	-	-	H
H	-	H	-	L
H	-	-	H	L
-	H	H	-	L
-	H	-	H	L
-	-	L	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.06	0.49	-0.15	0.91
	rise	0.09	0.87	0.90	2.10
B to Q	fall	0.08	0.53	0.12	1.08
	rise	0.10	0.89	0.62	1.71
C to Q	fall	0.08	0.52	-0.28	0.66
	rise	0.13	0.92	1.10	2.18
D to Q	fall	0.10	0.55	-0.10	0.75
	rise	0.15	0.94	0.86	1.84

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.07	0.66	0.58	1.39
	rise	0.15	1.32	0.63	1.75
B to Q	fall	0.09	0.72	0.74	1.46
	rise	0.15	1.32	0.70	1.71
C to Q	fall	0.07	0.69	0.59	1.27
	rise	0.20	1.38	0.65	1.80
D to Q	fall	0.09	0.72	0.74	1.33
	rise	0.20	1.38	0.74	1.75

Capacitance [fF]	
A	12.8680
B	14.8540
C	13.8440
D	15.7190

Leakage [pW]	
0.75	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	8.81	11.58	816.76	831.78
	rise	207.75	217.49	1496.01	1266.11
B to Q	fall	23.09	28.92	1081.18	942.03
	rise	286.18	294.13	1687.27	1433.26
C to Q	fall	5.60	8.07	816.07	827.55
	rise	352.83	359.61	1690.00	1433.33
D to Q	fall	32.06	38.31	1091.17	979.28
	rise	427.61	434.82	1920.73	1633.92

Databook Build Date: Wednesday Jun 18 17:26 2014

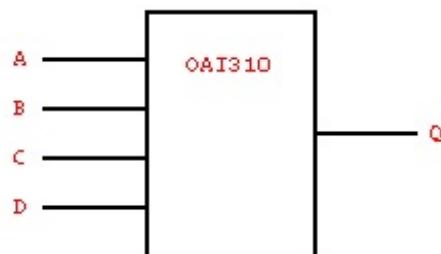
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	310
Cell Area	91.000 um ²
Equation	$Q = "!(D \& ((B A) C))"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	-	H
H	-	-	H	L
-	H	-	H	L
-	-	H	H	L
-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.13	0.56	0.04	0.80
	rise	0.20	0.98	0.69	1.61
B to Q	fall	0.11	0.54	-0.10	0.72
	rise	0.18	0.96	0.93	1.87
C to Q	fall	0.09	0.51	-0.27	0.64
	rise	0.14	0.92	1.09	2.11
D to Q	fall	0.10	0.54	-0.10	0.91
	rise	0.13	1.01	1.25	2.43

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.13	0.73	0.89	1.41
	rise	0.22	1.38	0.89	1.81
B to Q	fall	0.10	0.70	0.73	1.33
	rise	0.22	1.38	0.73	1.73
C to Q	fall	0.07	0.67	0.60	1.26
	rise	0.22	1.38	0.65	1.77
D to Q	fall	0.13	0.73	0.70	1.45
	rise	0.31	1.60	0.88	2.04

Capacitance [fF]	
A	6.2730
B	5.6440
C	5.4880
D	4.1030

Leakage [pW]	
0.36	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	28.36	32.29	393.39	335.63
	rise	161.60	162.96	627.84	538.09
B to Q	fall	19.78	21.24	302.24	288.12
	rise	132.08	133.71	532.64	454.45
C to Q	fall	7.82	9.26	242.77	251.07
	rise	102.16	104.15	477.04	405.66
D to Q	fall	27.80	28.89	194.66	180.80
	rise	61.38	63.01	336.52	274.74

Databook Build Date: Wednesday Jun 18 17:26 2014

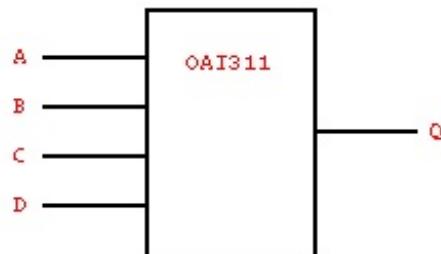
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	311
Cell Area	91.000 um ²
Equation	$Q = "!(D \& ((B A) C))"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	-	H
H	-	-	H	L
-	H	-	H	L
-	-	H	H	L
-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.11	0.54	0.01	0.78
	rise	0.18	0.95	0.66	1.58
B to Q	fall	0.10	0.52	-0.13	0.70
	rise	0.16	0.93	0.89	1.84
C to Q	fall	0.07	0.49	-0.30	0.62
	rise	0.12	0.89	1.04	2.08
D to Q	fall	0.09	0.52	-0.11	0.90
	rise	0.11	0.95	1.17	2.33

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.12	0.70	0.86	1.38
	rise	0.19	1.34	0.85	1.76
B to Q	fall	0.09	0.67	0.70	1.30
	rise	0.19	1.34	0.69	1.69
C to Q	fall	0.06	0.64	0.56	1.23
	rise	0.19	1.34	0.60	1.73
D to Q	fall	0.11	0.70	0.68	1.43
	rise	0.28	1.51	0.86	1.97

Capacitance [fF]	
A	11.0760
B	9.9150
C	9.2360
D	6.4600

Leakage [pW]	
	0.47

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	41.78	50.68	773.69	663.71
	rise	301.22	304.16	1239.33	1060.62
B to Q	fall	26.35	29.18	584.15	566.79
	rise	241.32	244.87	1044.23	890.15
C to Q	fall	2.57	5.83	463.31	491.77
	rise	180.75	184.91	929.99	791.24
D to Q	fall	42.48	44.90	386.58	369.42
	rise	108.92	112.61	687.70	564.19

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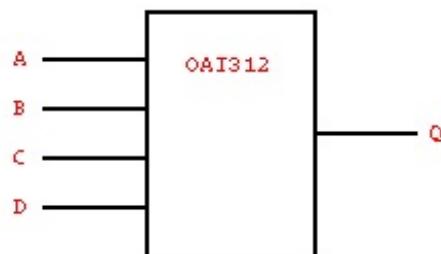
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	312
Cell Area	109.200 um ²
Equation	$Q = "!(D \& ((B A) C))"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	-	H
H	-	-	H	L
-	H	-	H	L
-	-	H	H	L
-	-	-	L	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.10	0.52	-0.03	0.75
	rise	0.17	0.96	0.66	1.61
B to Q	fall	0.09	0.50	-0.17	0.66
	rise	0.16	0.94	0.89	1.86
C to Q	fall	0.06	0.47	-0.35	0.58
	rise	0.11	0.90	1.03	2.10
D to Q	fall	0.08	0.50	-0.13	0.88
	rise	0.09	0.92	1.12	2.29

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	0.11	0.68	0.83	1.36
	rise	0.18	1.35	0.82	1.76
B to Q	fall	0.08	0.65	0.67	1.27
	rise	0.17	1.35	0.65	1.69
C to Q	fall	0.05	0.61	0.53	1.21
	rise	0.17	1.35	0.55	1.73
D to Q	fall	0.10	0.68	0.65	1.41
	rise	0.25	1.47	0.83	1.93

Capacitance [fF]	
A	21.8870
B	19.0770
C	17.3460
D	11.1400

Leakage [pW]	
0.66	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		10.00	320.00	10.00	320.00
A to Q	fall	61.31	83.06	1478.66	1280.35
	rise	565.09	572.24	2410.30	2053.14
B to Q	fall	29.37	37.00	1099.86	1090.64
	rise	450.57	457.99	2032.58	1727.46
C to Q	fall	0.00	0.00	851.00	930.82
	rise	329.29	337.66	1804.70	1531.91
D to Q	fall	54.75	61.09	739.25	719.06
	rise	200.85	209.93	1367.15	1124.69

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Cell Area	36.400 um ²
Equation	Q = "0"
Type	Constant
Output	Q

Leakage [pW]
0.03

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (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	36.400 um ²
Equation	Q = "1"
Type	Constant
Output	Q

Leakage [pW]
0.03

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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.Propagation delay is measured from **50%** (input rise) or **50%** (input fall) to **50%** (output rise) or **50%** (output fall).

Cell Area	36.400 um ²
Type	Physical
Output	Q



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Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.Propagation delay is measured from **50%** (input rise) or **50%** (input fall) to **50%** (output rise) or **50%** (output fall).

Cell Area	36.400 um ²
Type	Physical
Output	Q



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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	20
Cell Area	109.200 um ²
Equation	$Q = "!(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
L	H	L
H	L	L
H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.31	0.78	1.52	2.06
	rise	0.24	1.10	1.15	2.21
B to Q	fall	0.32	0.81	1.62	2.17
	rise	0.25	1.11	0.89	1.85

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	0.13	0.70	0.60	1.26
	rise	0.19	1.42	0.61	1.78
B to Q	fall	0.12	0.69	0.75	1.32
	rise	0.19	1.42	0.70	1.74

Capacitance [fF]	
A	7.9510
B	8.8950

Leakage [pW]	
0.61	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	2.50	80.00	2.50	80.00	
A to Q	fall	64.78	64.68	237.65	239.56
	rise	71.80	70.70	303.73	267.89
B to Q	fall	71.08	77.00	284.22	271.06
	rise	74.31	72.90	328.09	292.08

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	109.200 um ²
Equation	$Q = "!(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
L	H	L
H	L	L
H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.23	0.68	1.39	1.90
	rise	0.20	1.01	0.84	1.81
B to Q	fall	0.23	0.66	1.26	1.77
	rise	0.19	1.01	1.10	2.17

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.09	0.66	0.72	1.30
	rise	0.17	1.35	0.66	1.69
B to Q	fall	0.11	0.67	0.57	1.23
	rise	0.17	1.35	0.57	1.73

Capacitance [fF]	
A	13.6350
B	11.9360

Leakage [pW]	
	0.79

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	119.94	128.94	560.13	536.71
	rise	117.80	116.28	638.79	579.16
B to Q	fall	105.38	103.42	460.90	471.40
	rise	112.61	111.71	587.18	527.38

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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	200.200 um ²
Equation	$Q = "!(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	H
L	H	L
H	L	L
H	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	0.19	0.63	1.29
	rise	0.16	0.97	1.81
B to Q	fall	0.19	0.62	1.16
	rise	0.16	0.96	1.08

Output Transition [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	0.08	0.67	0.72
	rise	0.16	1.33	0.67
B to Q	fall	0.10	0.67	0.55
	rise	0.16	1.33	0.55

Capacitance [fF]	
A	26.2450
B	22.2610

Leakage [pW]	
1.35	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00
A to Q	fall	235.80	257.14	1119.52
	rise	210.61	210.86	1249.49
B to Q	fall	199.66	202.78	914.45
	rise	192.98	192.53	1152.59

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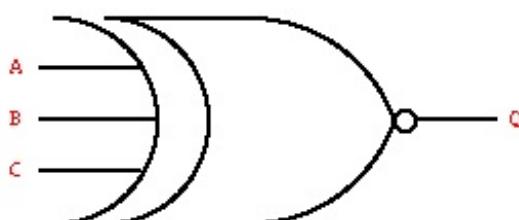
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	200.200 um ²
Equation	$Q = "!(C \wedge B) \wedge A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
L	L	H	L
L	H	L	L
L	H	H	H
H	L	L	L
H	L	H	H
H	H	L	H
H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.64	1.17	1.85	2.38
	rise	0.58	1.35	1.69	2.49
B to Q	fall	0.69	1.22	2.01	2.54
	rise	0.58	1.36	1.85	2.65
C to Q	fall	0.29	0.81	1.26	1.84
	rise	0.18	0.97	0.86	1.84

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.15	0.73	0.24	0.77
	rise	0.17	1.36	0.21	1.36
B to Q	fall	0.15	0.73	0.23	0.75
	rise	0.17	1.36	0.20	1.35
C to Q	fall	0.11	0.73	0.74	1.34
	rise	0.17	1.36	0.70	1.72

Capacitance [fF]	
A	7.0730
B	8.3820
C	7.9690

Leakage [pW]	
	1.24

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	197.64	207.33	440.93	486.05
	rise	190.81	190.70	438.39	469.41
B to Q	fall	197.52	207.34	416.71	458.62
	rise	190.67	190.44	413.60	443.40
C to Q	fall	84.87	92.42	326.82	323.54
	rise	62.41	62.28	344.38	317.23

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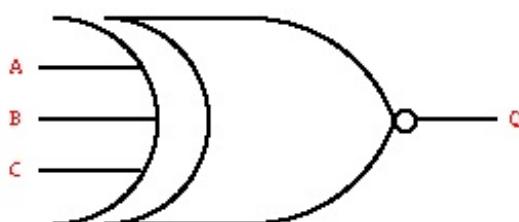
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	200.200 um ²
Equation	$Q = "!(C \wedge B) \wedge A"$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	H
L	L	H	L
L	H	L	L
L	H	H	H
H	L	L	L
H	L	H	H
H	H	L	H
H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.62	1.16	1.83	2.38
	rise	0.67	1.43	1.73	2.52
B to Q	fall	0.66	1.21	1.99	2.53
	rise	0.67	1.44	1.89	2.68
C to Q	fall	0.22	0.77	0.94	1.54
	rise	0.17	0.95	0.83	1.80

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	0.16	0.76	0.25	0.76
	rise	0.15	1.32	0.21	1.32
B to Q	fall	0.16	0.76	0.24	0.76
	rise	0.15	1.32	0.21	1.32
C to Q	fall	0.10	0.76	0.72	1.31
	rise	0.15	1.32	0.67	1.68

Capacitance [fF]	
A	7.0660
B	8.3720
C	13.1410

Leakage [pW]	
	1.42

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	281.32	292.25	539.66	577.93
	rise	278.54	276.47	544.50	560.06
B to Q	fall	281.19	292.10	514.71	550.00
	rise	278.17	275.94	517.75	533.81
C to Q	fall	137.56	149.01	593.41	593.56
	rise	106.20	106.28	664.69	604.64

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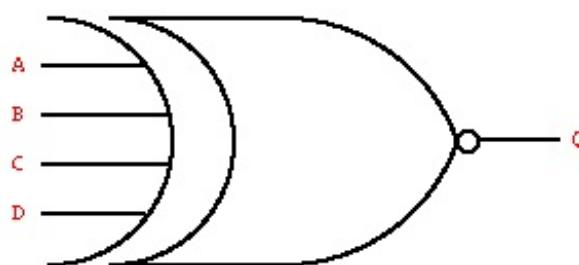
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	40
Cell Area	273.000 um ²
Equation	$Q = "!(D \wedge C) \wedge B \wedge A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	H
L	L	L	H	L
L	L	H	L	L
L	L	H	H	H
L	H	L	L	L
L	H	L	H	H
L	H	H	L	H
L	H	H	H	L
H	L	L	L	L
H	L	L	H	H
H	L	H	L	H
H	L	H	H	H
H	L	H	H	L
H	H	L	L	H
H	H	L	H	L
H	H	H	L	L
H	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.67	1.16	2.00	2.48
	rise	0.53	1.40	1.81	2.60
B to Q	fall	0.67	1.16	1.88	2.37
	rise	0.53	1.39	1.70	2.49
C to Q	fall	0.69	1.15	2.01	2.47
	rise	0.55	1.41	1.82	2.61
D to Q	fall	0.68	1.14	1.90	2.36
	rise	0.54	1.41	1.71	2.50

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.11	0.69	0.21	0.72
	rise	0.18	1.41	0.23	1.41
B to Q	fall	0.11	0.69	0.20	0.71
	rise	0.18	1.41	0.23	1.41
C to Q	fall	0.13	0.70	0.18	0.70
	rise	0.18	1.41	0.23	1.41
D to Q	fall	0.13	0.70	0.17	0.70
	rise	0.18	1.41	0.23	1.41

Capacitance [fF]	
A	7.7230
B	7.4560
C	7.7480
D	7.6330

Leakage [pW]	
1.76	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	172.75	183.62	416.78	463.06
	rise	177.33	179.25	424.35	462.18
B to Q	fall	167.42	178.37	385.27	425.84
	rise	172.23	173.89	390.91	425.01
C to Q	fall	173.39	183.57	413.47	460.24
	rise	176.48	176.87	424.51	458.81
D to Q	fall	168.14	178.25	383.25	423.51
	rise	171.20	171.65	390.76	421.91

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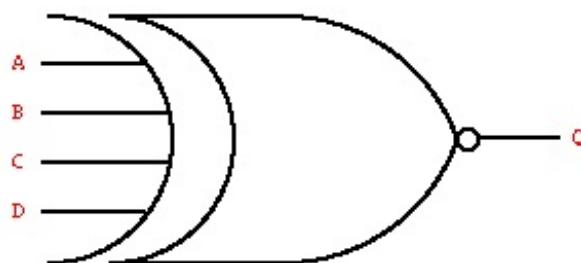
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	273.000 um ²
Equation	$Q = "!(D \wedge C) \wedge B \wedge A"$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	H
L	L	L	H	L
L	L	H	L	L
L	L	H	H	H
L	H	L	L	L
L	H	L	H	H
L	H	H	L	H
L	H	H	H	L
H	L	L	L	L
H	L	L	H	H
H	L	H	L	H
H	L	H	H	H
H	L	H	H	L
H	H	L	L	H
H	H	L	H	L
H	H	H	L	L
H	H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.65	1.10	1.98	2.43
	rise	0.55	1.37	1.86	2.63
B to Q	fall	0.64	1.09	1.87	2.31
	rise	0.54	1.37	1.74	2.52
C to Q	fall	0.65	1.09	1.98	2.42
	rise	0.54	1.36	1.86	2.63
D to Q	fall	0.64	1.08	1.87	2.30
	rise	0.53	1.35	1.74	2.52

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.13	0.67	0.23	0.71
	rise	0.17	1.34	0.23	1.34
B to Q	fall	0.13	0.67	0.22	0.69
	rise	0.17	1.34	0.22	1.34
C to Q	fall	0.10	0.66	0.19	0.69
	rise	0.17	1.34	0.22	1.37
D to Q	fall	0.10	0.66	0.19	0.67
	rise	0.17	1.34	0.21	1.37

Capacitance [fF]	
A	7.7140
B	7.4430
C	7.7410
D	7.6210

Leakage [pW]	
1.94	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	248.24	260.22	508.23	544.43
	rise	247.89	253.87	512.70	543.11
B to Q	fall	242.55	254.70	475.95	506.66
	rise	242.46	248.35	477.28	505.36
C to Q	fall	240.10	248.83	493.83	530.49
	rise	235.54	237.59	498.44	526.67
D to Q	fall	234.58	243.21	463.20	493.22
	rise	230.05	232.42	463.36	489.07

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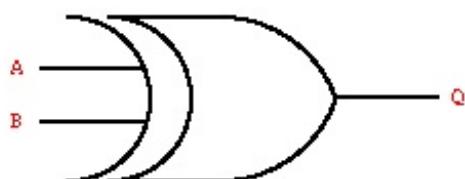
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	20
Cell Area	127.400 um ²
Equation	$Q = "(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	L
L	H	H
H	L	H
H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.26	0.78	0.79	1.40
	rise	0.23	1.00	0.67	1.75
B to Q	fall	0.24	0.76	1.06	1.63
	rise	0.18	0.97	0.86	1.84

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.11	0.73	0.79	1.47
	rise	0.17	1.36	0.67	1.71
B to Q	fall	0.11	0.73	0.75	1.34
	rise	0.17	1.36	0.70	1.72

Capacitance [fF]	
A	9.4950
B	9.3320

Leakage [pW]	
0.67	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	81.93	87.28	330.46	336.16
	rise	82.38	78.69	371.31	350.47
B to Q	fall	79.43	84.71	329.72	332.49
	rise	71.22	72.00	365.93	342.89

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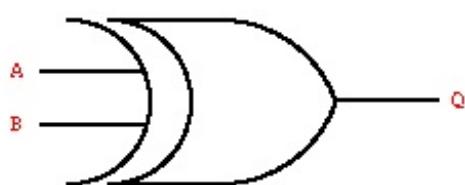
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	21
Cell Area	127.400 um ²
Equation	$Q = "(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	L
L	H	H
H	L	H
H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.24	0.78	0.67	1.31
	rise	0.22	0.98	0.63	1.72
B to Q	fall	0.22	0.77	0.94	1.54
	rise	0.17	0.95	0.83	1.80

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.09	0.76	0.76	1.44
	rise	0.15	1.32	0.64	1.67
B to Q	fall	0.09	0.76	0.72	1.31
	rise	0.15	1.32	0.67	1.68

Capacitance [fF]	
A	13.7760
B	14.0970

Leakage [pW]	
	0.84

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	132.77	139.70	575.57	579.01
	rise	138.66	130.85	675.72	622.49
B to Q	fall	128.60	135.48	579.86	579.73
	rise	120.18	122.80	678.78	620.37

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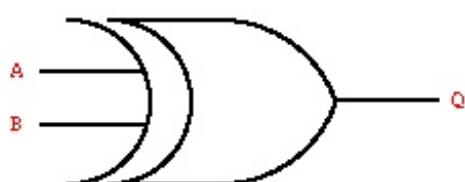
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	22
Cell Area	200.200 um ²
Equation	$Q = "(B \wedge A)"$
Type	Combinational
Input	A, B
Output	Q



State Table		
A	B	Q
L	L	L
L	H	H
H	L	H
H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.21	0.73	0.59	1.22
	rise	0.20	0.96	0.60	1.70
B to Q	fall	0.19	0.72	0.85	1.44
	rise	0.15	0.93	0.82	1.80

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	0.09	0.73	0.73	1.44
	rise	0.14	1.31	0.62	1.65
B to Q	fall	0.09	0.73	0.72	1.30
	rise	0.14	1.31	0.65	1.67

Capacitance [fF]	
A	25.2860
B	23.8790

Leakage [pW]	
	1.32

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	10.00	320.00	10.00	320.00	
A to Q	fall	210.33	224.69	1084.88	1102.85
	rise	271.51	259.23	1332.13	1241.26
B to Q	fall	200.47	215.77	1097.87	1101.65
	rise	235.55	242.40	1342.75	1239.13

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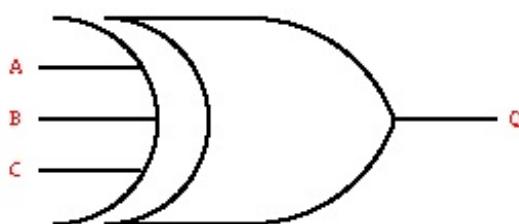
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	30
Cell Area	200.200 um ²
Equation	$Q = ((C \wedge B) \wedge A)$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	L
L	L	H	H
L	H	L	H
L	H	H	L
H	L	L	H
H	L	H	L
H	H	L	L
H	H	H	H

Propagation Delay [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.70	1.16	1.91	2.38
	rise	0.53	1.39	1.71	2.50
B to Q	fall	0.75	1.21	2.07	2.54
	rise	0.54	1.40	1.87	2.66
C to Q	fall	0.27	0.74	1.45	1.99
	rise	0.22	1.08	0.86	1.84

Output Transition [ns]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.13	0.70	0.18	0.70
	rise	0.18	1.41	0.23	1.41
B to Q	fall	0.13	0.70	0.18	0.70
	rise	0.18	1.41	0.23	1.41
C to Q	fall	0.10	0.68	0.73	1.32
	rise	0.17	1.41	0.68	1.72

Capacitance [fF]	
A	7.0220
B	8.3780
C	6.9670

Leakage [pW]	
	1.18

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01	4.00		
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	180.74	191.87	420.63	465.43
	rise	176.07	177.03	419.58	454.68
B to Q	fall	180.43	191.61	398.41	439.49
	rise	175.91	176.60	396.00	428.71
C to Q	fall	61.51	68.07	269.16	258.61
	rise	62.66	61.78	320.79	281.31

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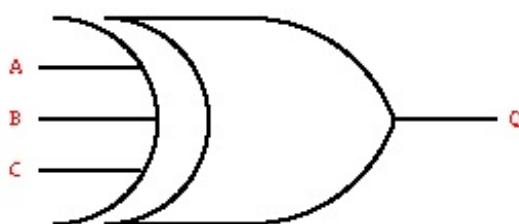
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 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	31
Cell Area	200.200 um ²
Equation	$Q = ((C \wedge B) \wedge A)$
Type	Combinational
Input	A, B, C
Output	Q



State Table			
A	B	C	Q
L	L	L	L
L	L	H	H
L	H	L	H
L	H	H	L
H	L	L	H
H	L	H	L
H	H	L	L
H	H	H	H

Propagation Delay [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.66	1.10	1.89
	rise	0.53	1.35	2.52
B to Q	fall	0.71	1.15	2.05
	rise	0.57	1.36	1.91
C to Q	fall	0.19	0.64	1.21
	rise	0.17	0.99	0.83

Output Transition [ns]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	0.11	0.66	0.19
	rise	0.17	1.34	0.22
B to Q	fall	0.11	0.66	0.19
	rise	0.17	1.34	0.21
C to Q	fall	0.08	0.66	0.71
	rise	0.16	1.34	0.65

Capacitance [fF]	
A	7.0380
B	8.3920
C	11.8280

Leakage [pW]	
1.36	

Dynamic Power Consumption [nW/MHz]				
Input Transition [ns]		0.01	4.00	
Load Capacitance [fF]		5.00	160.00	5.00
A to Q	fall	255.37	265.45	509.35
	rise	235.91	238.80	494.91
B to Q	fall	254.74	264.94	487.27
	rise	235.57	238.34	469.88
C to Q	fall	103.08	111.69	527.87
	rise	101.86	101.80	630.56

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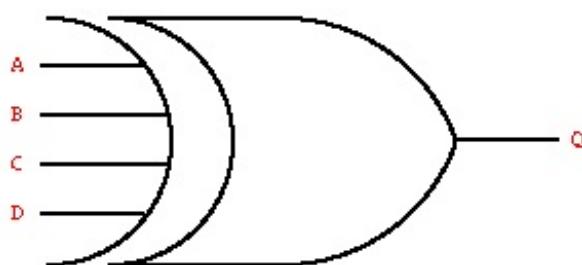
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	40
Cell Area	273.000 um ²
Equation	$Q = (((D \wedge C) \wedge B) \wedge A)$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	L
L	L	L	H	H
L	L	H	L	H
L	L	H	H	L
L	H	L	L	H
L	H	L	H	L
L	H	H	L	L
L	H	H	H	H
H	L	L	L	H
H	L	L	H	L
H	L	H	L	L
H	L	H	H	H
H	H	L	L	L
H	H	L	H	H
H	H	H	L	H
H	H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.66	1.19	1.97	2.50
	rise	0.58	1.35	1.81	2.61
B to Q	fall	0.65	1.18	1.86	2.39
	rise	0.57	1.35	1.70	2.50
C to Q	fall	0.67	1.20	1.99	2.52
	rise	0.54	1.33	1.83	2.63
D to Q	fall	0.66	1.19	1.88	2.41
	rise	0.54	1.33	1.72	2.52

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	0.15	0.73	0.24	0.77
	rise	0.16	1.36	0.21	1.35
B to Q	fall	0.15	0.73	0.23	0.75
	rise	0.16	1.36	0.20	1.35
C to Q	fall	0.14	0.73	0.23	0.74
	rise	0.18	1.36	0.23	1.38
D to Q	fall	0.14	0.73	0.22	0.73
	rise	0.18	1.36	0.22	1.38

Capacitance [fF]	
A	7.5770
B	7.5930
C	7.5530
D	7.6540

Leakage [pW]	
	1.82

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		2.50	80.00	2.50	80.00
A to Q	fall	198.55	208.61	443.87	490.27
	rise	190.88	190.63	440.77	472.51
B to Q	fall	193.40	203.39	410.88	452.15
	rise	185.65	185.36	406.28	435.68
C to Q	fall	198.19	211.08	443.01	492.26
	rise	186.22	188.29	434.83	469.63
D to Q	fall	192.81	205.78	410.97	454.73
	rise	181.02	183.22	400.32	432.80

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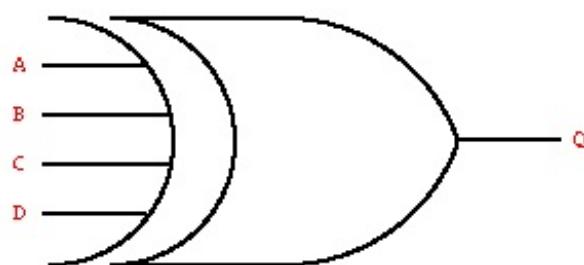
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 Conditions for characterization library **c35_CORELIB_TYP**, corner **c35_CORELIB_TYP_typical**: Vdd= **3.30V**, Tj= **25.0** deg. C .

 Output transition is defined from **20%** to **80%** (rising) and from **80%** to **20%** (falling) output voltage.

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

Strength	41
Cell Area	273.000 um ²
Equation	$Q = (((D \wedge C) \wedge B) \wedge A)$
Type	Combinational
Input	A, B, C, D
Output	Q



State Table				
A	B	C	D	Q
L	L	L	L	L
L	L	L	H	H
L	L	H	L	H
L	L	H	H	L
L	H	L	L	H
L	H	L	H	L
L	H	H	L	L
L	H	H	H	H
H	L	L	L	H
H	L	L	H	L
H	L	H	L	L
H	L	H	H	H
H	H	L	L	L
H	H	L	H	H
H	H	H	L	H
H	H	H	H	L

Propagation Delay [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.64	1.18	1.95	2.50
	rise	0.66	1.43	1.85	2.64
B to Q	fall	0.62	1.17	1.84	2.38
	rise	0.66	1.42	1.74	2.52
C to Q	fall	0.66	1.21	1.99	2.53
	rise	0.62	1.40	1.86	2.65
D to Q	fall	0.65	1.20	1.87	2.42
	rise	0.62	1.39	1.75	2.53

Output Transition [ns]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]	5.00	160.00	5.00	160.00	
A to Q	fall	0.16	0.76	0.25	0.76
	rise	0.15	1.32	0.21	1.32
B to Q	fall	0.16	0.76	0.24	0.76
	rise	0.15	1.32	0.20	1.32
C to Q	fall	0.14	0.76	0.24	0.76
	rise	0.17	1.32	0.22	1.34
D to Q	fall	0.14	0.76	0.23	0.76
	rise	0.17	1.32	0.22	1.34

Capacitance [fF]	
A	7.5730
B	7.5830
C	7.5460
D	7.6410

Leakage [pW]	
1.99	

Dynamic Power Consumption [nW/MHz]					
Input Transition [ns]		0.01		4.00	
Load Capacitance [fF]		5.00	160.00	5.00	160.00
A to Q	fall	281.47	293.14	541.71	582.13
	rise	275.12	272.73	543.99	560.21
B to Q	fall	275.82	287.72	507.55	543.13
	rise	269.53	267.31	506.76	522.54
C to Q	fall	280.77	298.95	541.41	586.93
	rise	264.68	267.76	531.89	554.05
D to Q	fall	275.11	293.35	508.32	548.80
	rise	259.05	262.23	494.46	516.40