Cell 001 Inverter					
Truth Table		Symbol	Symbol Pin Capac		
A	F	_	Pin	Cap[pF]	
0	1	A F	A	0.05087	
1	0			_	
	_				
Siz	ze	85	μm ²		
Dynamie dissip		25	μWatt/ MHz		

	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.6	0.86	0.38	0.78

Cell 001 Buffer						
Truth	Table	Symbol	Pin Ca _l	pacitance		
A	F		Pin	Cap[pF]		
1	1	F	A	0.05087		
0	0 0 A \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
Si	ize	146.25	μm^2			
	ic power pation	50	μWatt/ MHz			

	Rise LH Transition		Fall HL 7	Γransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.02	1.4	1.2	1.52

Cell 002 Inverter					
Truth Table		Symbol	Pin Cap	acitance	
A	F	_	Pin	Cap[pF]	
0	1	A — >>—out	A	0.05115	
1	0				
Si	ze	85	μm ²		
	ic power pation	12.5	μWatt/ MHz		

	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.4	0.831	0.142	0.258

Cell 002 Buffer					
Truth	Table	Symbol	Pin Caj	pacitance	
A	F		Pin	Cap[pF]	
1	1	in → Out	in	0.05128	
0	0	ın → Out			
~				2	
Si	ze	141.25	μm²		
•	ic power pation	25	μWatt/ MHz		

	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.604	0.948	0.565	0.698

Cell 003 Inverter					
Truth	Table	Symbol	Pin Cap	acitance	
A	F		Pin	Cap[pF]	
0	1	A — > out	A	0.045	
1	0				
Si	ze	78	μm ²		
Dynami dissip		p25	μWatt/ MHz		
		1			

	Rise LH Transition		Fall HL 7	Γransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.08	0.14	0.4	0.8

Cell 003 Buffer							
Truth Table	Symbol	Pin Car	pacitance				
A F		Pin	Cap[pF]				
1 1	. N N F	A	0.06				
0 0	A X)—	1					
		l					
		l					
		l					
Size	121.875	μm^2					
Dynamic power	50	μWatt/ MHz					
dissipation	30	μ νν αι	U MITIZ				

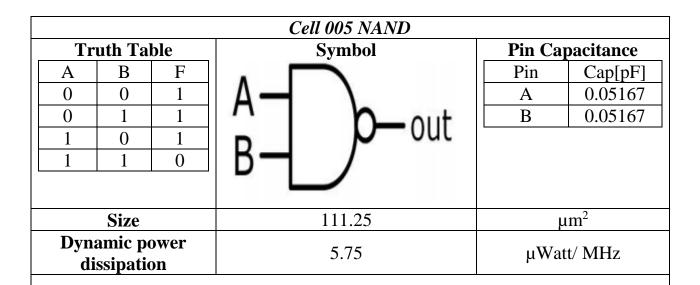
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay in=>F	0.7	1.2	0.6	0.7

Cell 004 Inverter					
Truth	Table	Symbol	Pin Ca	pacitance	
A	F	_	Pin	Cap[pF]	
0	1	A → >>out	A	0.44419	
1	0				
	_				
Si	ize	105	μ	1m^2	
Dynamic power		25	μWatt/ MHz		
dissij	pation	23	μνναι	LU/ 1 V111 Z	

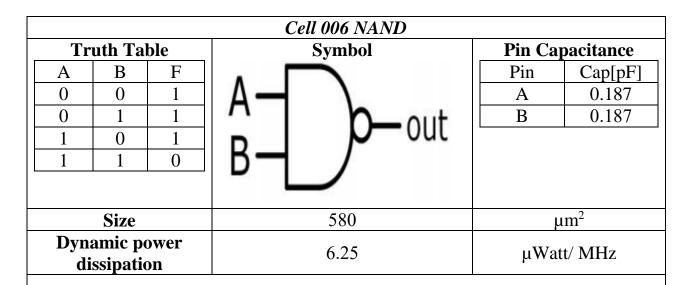
	Rise LH	Γransition	Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.06	0.14	0.4	0.78

	Cell 004 Buffer					
Truth Table	Symbol	Pin Capacitance				
A F		Pin Cap[pF]				
1 1	A F	A 0.20175				
0 0						
Size	160	μm^2				
Dynamic power dissipation	25	μWatt/ MHz				
-	Propagation Delay					

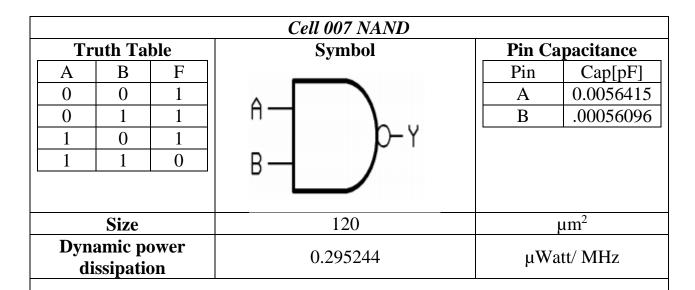
	Rise LH Transition		LH Transition Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay in=>F	0.44	0.9	0.41	0.4



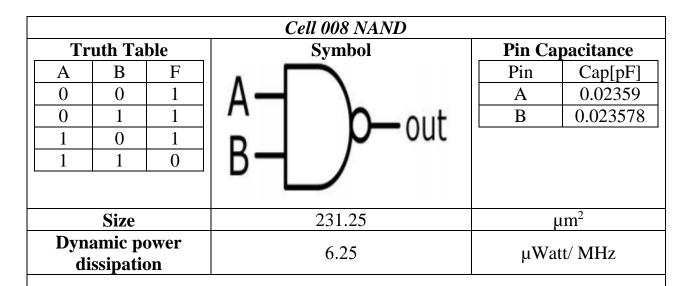
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.363	0.58	0.145	0.0576
Delay B=>F	0.32	0.496	0.143	0.06



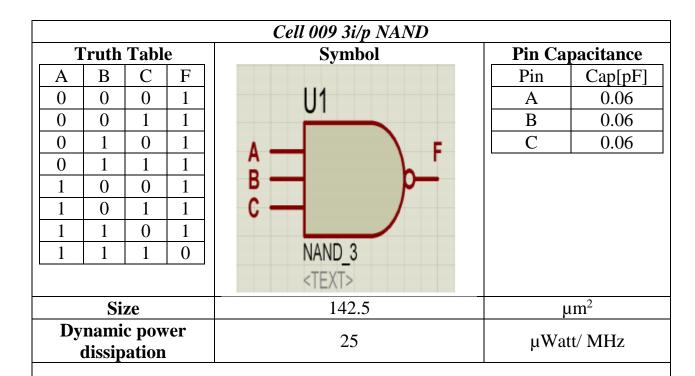
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.275	0.5633	0.182	0.408
Delay B=>F	0.3062	0.5361	0.216	0.408



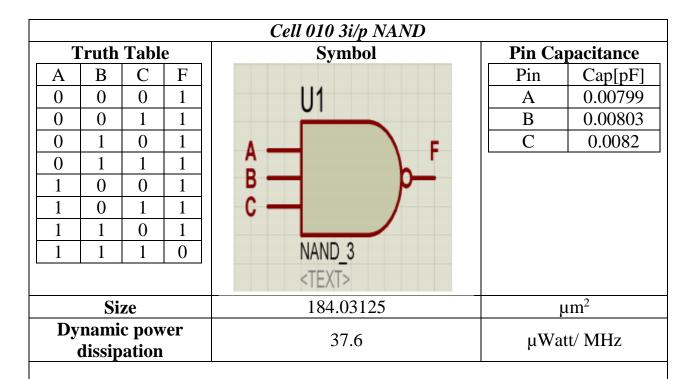
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.131	0.131	1.1521	1.4583
Delay B=>F	0.136	0.159	1.1865	1.4661



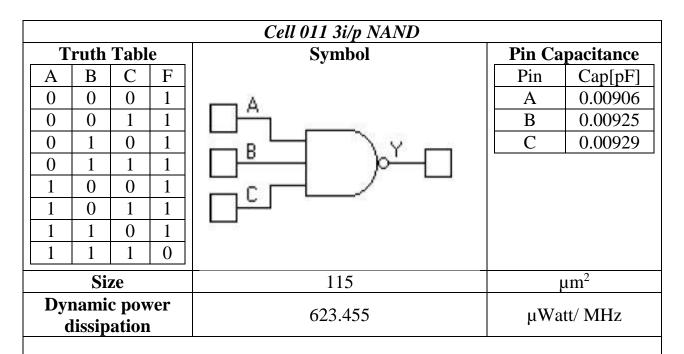
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.161	1.121n	0.688	1.1152
Delay B=>F	0.173	1.131n	0.689	1.1122



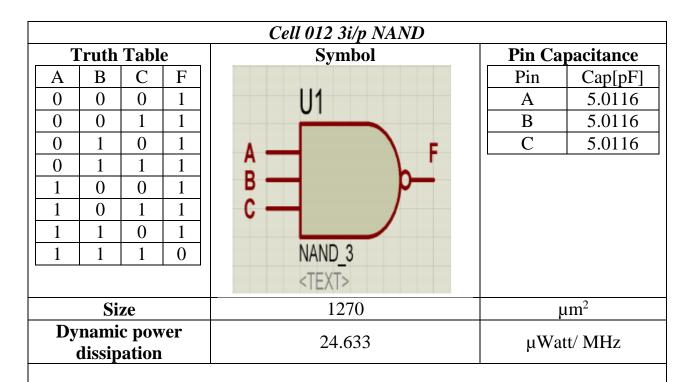
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.9906	1.329	1.697	2.117
Delay B=>F	0.9366	1.236	1.63	1.926
Delay C=>F	0.7747	1.161	1.43	1.76



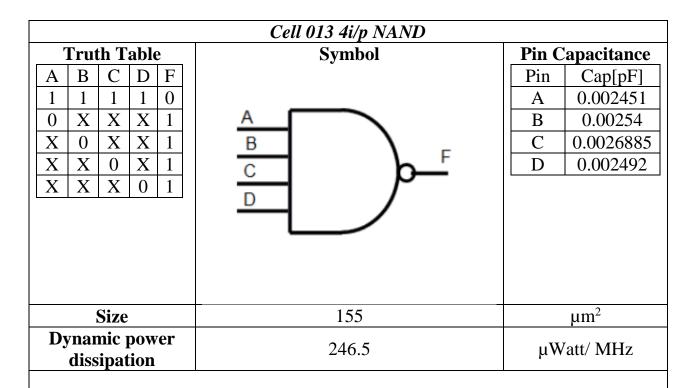
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.8	1.075	0.675	0.95
Delay B=>F	0.875	1	0.625	0.9
Delay C=>F	0.675	0.9	0.5	0.75



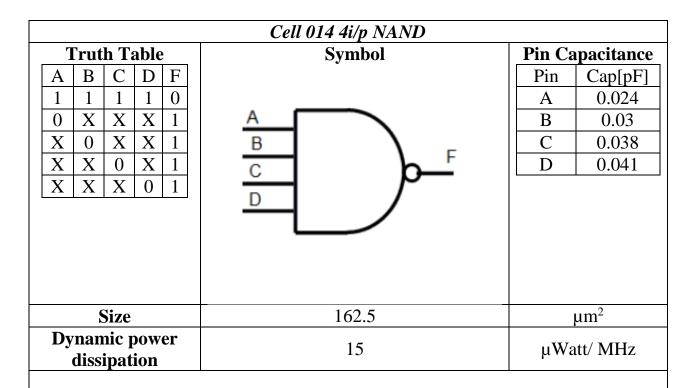
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.55	0.8	7.35	7.5
Delay B=>F	0.55	0.8	7.55	7.7
Delay C=>F	0.55	0.8	7.25	7.5



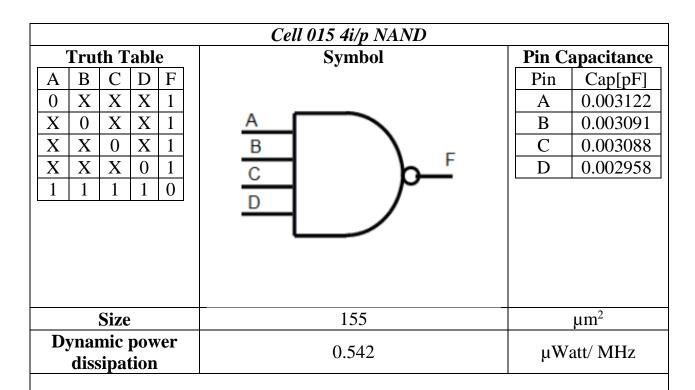
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.699	1.012	1.51	1.782
Delay B=>F	0.633	0.956	1.369	1.738
Delay C=>F	0.518	0.84	1.168	1.479



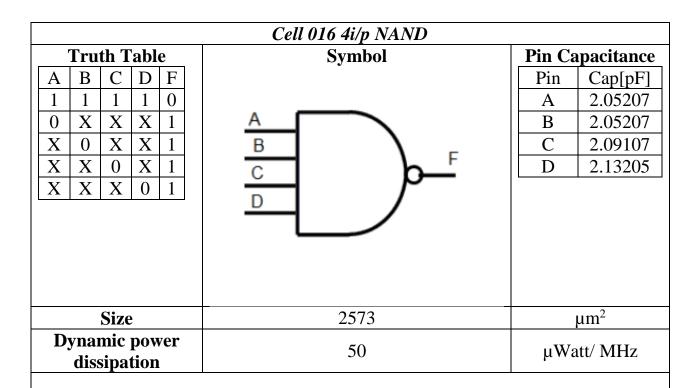
· I ···· S ·······						
	Rise LH Transition		Fall HL 7	Transition		
Input Slope [ns]	0.05 2		0.05	2		
Delay A=>F	0.916	1.2524	2.1362	2.2338		
Delay B=>F	0.79	1.1533	2.0321	2.2558		
Delay C=>F	0.7344	1.1138	1.796	2.1397		
Delay D=>F	0.869	1.1762	2.1307	2.3404		



	Rise LH Transition		Fall HL 7	Transition		
Input Slope [ns]	0.05 2		0.05	2		
Delay A=>F	0.745	1.238	4.4146	4.2589		
Delay B=>F	0.7532	1.229	4.537	4.1813		
Delay C=>F	0.722	1.237	4.2413	4.3642		
Delay D=>F	0.643	1.179	4.5819	4.3067		



<u> </u>						
	Rise LH Transition		Fall HL 7	Transition		
Input Slope [ns]	0.05 2		0.05	2		
Delay A=>F	0.201	0.288	3.236	3.412		
Delay B=>F	0.203	0.283	3.166	3.387		
Delay C=>F	0.196	0.281	3.021	3.3		
Delay D=>F	0.186	0.242	2.769	3.12		



· I ···· S ·······						
	Rise LH Transition		Fall HL 7	Transition		
Input Slope [ns]	0.05 2		0.05	2		
Delay A=>F	0.1435	0.2052	2.903	3.263		
Delay B=>F	0.1041	0.1712	2.541	3.017		
Delay C=>F	0.1652	0.1312	2.747	2.934		
Delay D=>F	0.1389	0.1312	2.459	2.688		

Cell 017 NOR							
Truth Table		ble	Symbol	Pin Ca	pacitance		
A	В	F		Pin	Cap[pF]		
0	0	1	NOR	A	0.032		
0	1	0	3	В	0.0154		
1	1 0 0 1 1 0 b						
	Size		131.25	μm^2			
-	amic p ssipati		12.5	μWatt/ MHz			

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.9	1.3	0.22	0.5
Delay B=>F	0.9	1.3	0.22	0.5

Cell 018 NOR							
Truth Tabl	e	Symbol	Pin Cap	pacitance			
A B	F		Pin	Cap[pF]			
0 0	1	NOR	A	0.0525			
0 1	0	a	В	0.0525			
1 0	0	- T.		_			
1 1 0		ь					
Size		131.25	μm^2				
Dynamic pow dissipation		12.5	μWatt/ MHz				

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.383	0.424	0.407	0.821
Delay B=>F	0.308	0.372	0.293	0.685

	Cell 019 NOR						
Tr	uth Ta	ble	Symbol	Pin Capacitance			
Α	В	F		Pin	Cap[pF]		
0	0	1	NOR	A	0.0536		
0	1	0		В	0.0529		
1	0	0	a v				
1	1 1 0		ь) І хо-				
			_				
	Size		137.5	μm^2			
Dyna	Dynamic power		12.5	uWo.	++/ MII.a		
di	dissipation		12.3	μWatt/ MHz			

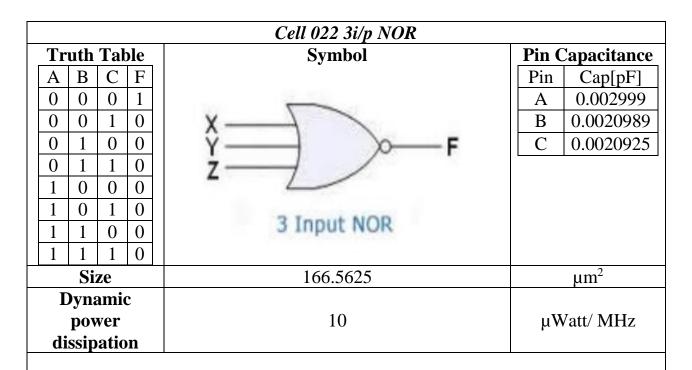
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.277	0.315	0.1878	0.499
Delay B=>F	0.14	0.306	0.1331	0.4336

	Cell 020 NOR							
Truth Tal	ble	Symbol	Pin C	Capacitance				
A B	F		Pin	Cap[pF]				
0 0	1	NOR	A	0.05723635				
0 1	0	a	В	0.05814472				
1 0 0		- T y						
1 1	0	ь						
Size		390	μm^2					
Dynamic po dissipation		14.275	μWatt/ MHz					

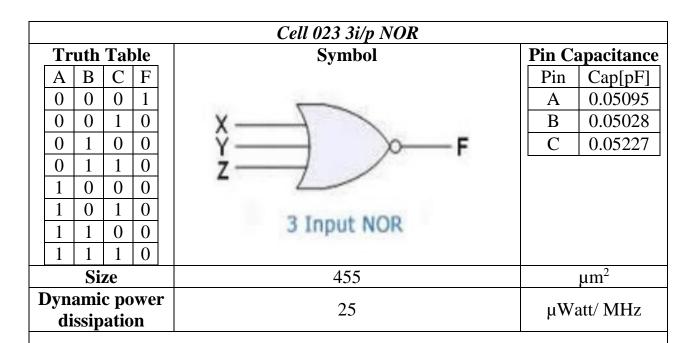
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.011	1.2009	0.521	0.855
Delay B=>F	0.9272	0.306	0.453	0.784

	Cell 021 3i/p NOR					
Truth Table	Symbol	Pin Ca	pacitance			
A B C F		Pin	Cap[pF]			
0 0 0 1	A	A	0.002215			
0 0 1 0	<u> </u>	В	0.002182			
0 1 0 0	В Б	С	0.002419			
0 1 1 0						
1 0 0 0	<u>c</u>					
1 0 1 0						
1 1 0 0	NOR					
1 1 1 0						
Size	213.75		μm²			
Dynamic power dissipation	0.499321	μWa	att/ MHz			

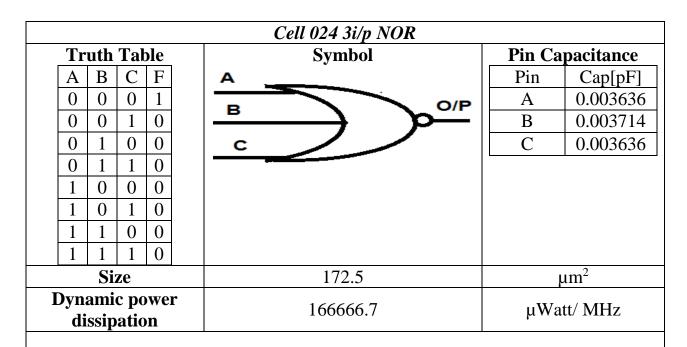
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.694	2.096	5.504	6.067
Delay B=>F	1.614	1.955	5.335	5.5
Delay C=>F	1.384	1.777	4.18	4.522



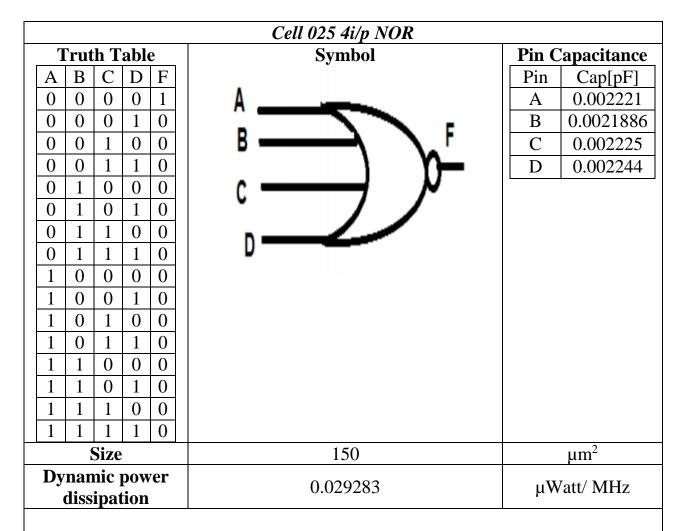
1 8					
	Rise LH Transition		Rise LH Transition Fall HL Trans		Γransition
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	4.65	4.991	2.32	2.27	
Delay B=>F	3.79	4.14	1.29	1.81	
Delay C=>F	3.976	5.06	1.45	1.7	



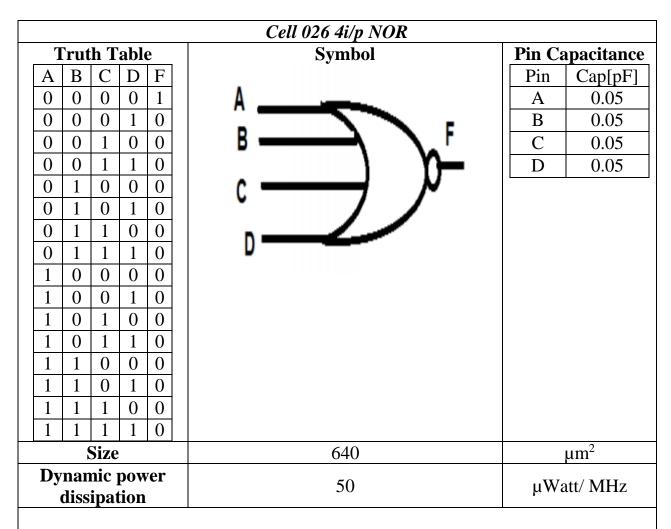
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.5891	0.6579	1.0618	1.3612
Delay B=>F	0.5094	0.5501	0.8605	1.1606
Delay C=>F	0.4608	0.5829	0.7604	1.085



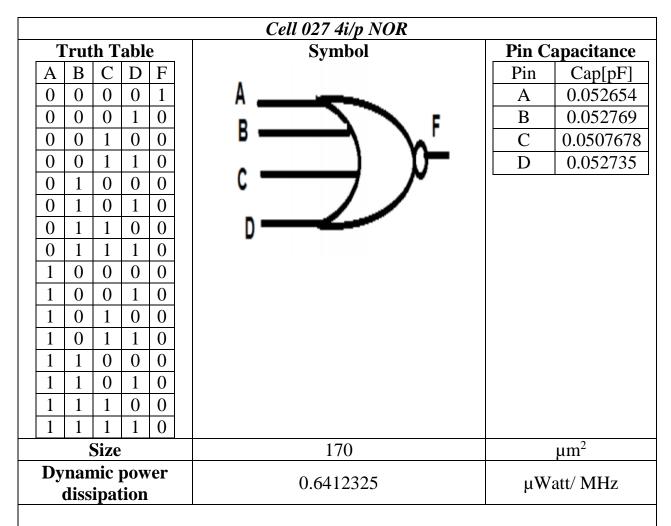
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1	2.5	0.2	1
Delay B=>F	1.4	2.5	0.5	1
Delay C=>F	1.5	1.7	0.5	0.7



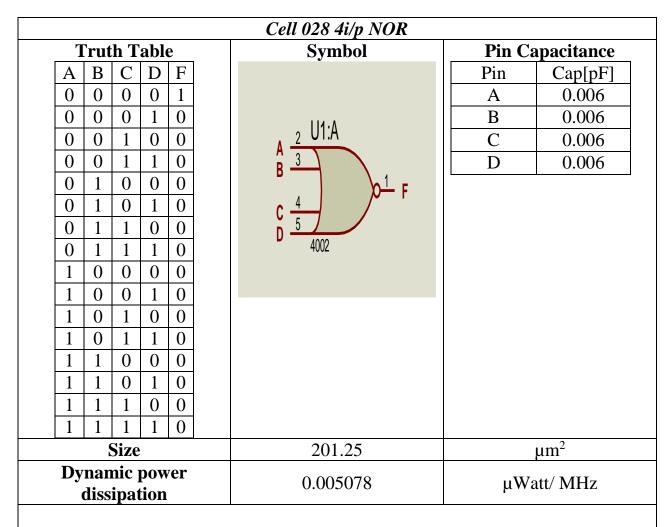
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	8.806	9.432	1.388	2.114
Delay B=>F	8.537	9.069	1.402	2.113
Delay C=>F	8.293	8.537	1.06	2.113
Delay D=>F	8.07	8.541	1.14	2.277



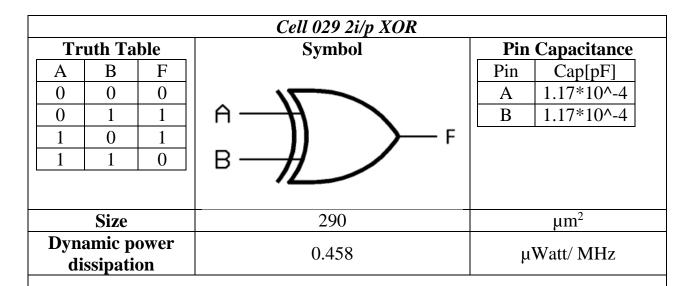
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.1	1.2	0.7	1.17
Delay B=>F	1.1	1.2	0.7	1.12
Delay C=>F	1.1	1.2	0.7	1.17
Delay D=>F	1.1	1.2	0.7	1.12



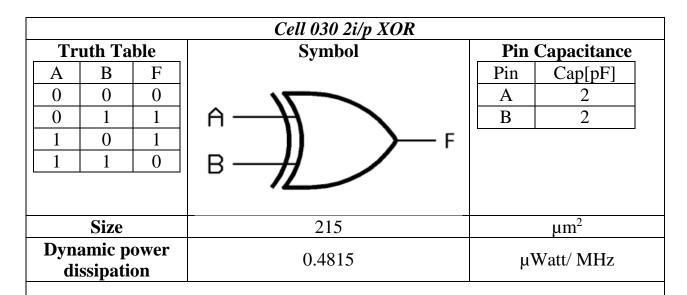
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.985	1.037	1.4556	1.8278
Delay B=>F	0.885	0.97	1.2704	1.6558
Delay C=>F	0.722	0.84	1.041	1.4259
Delay D=>F	0.44	0.725	0.7641	1.1433



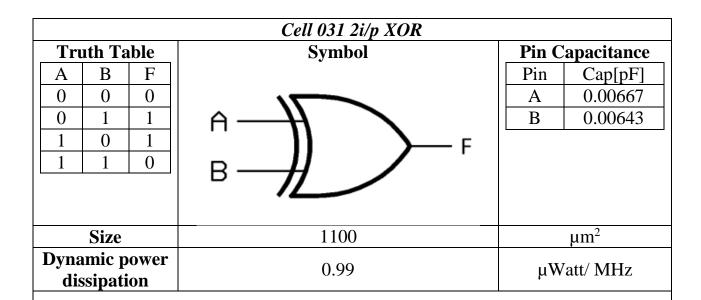
	Rise LH Transition		Rise LH Transition Fall HL Transit		Transition
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	2.3	2.7	1.4	1.9	
Delay B=>F	2.3	2.5	1.3	1.7	
Delay C=>F	2	2.2	1.1	1.6	
Delay D=>F	1.3	1.6	0.8	1.3	



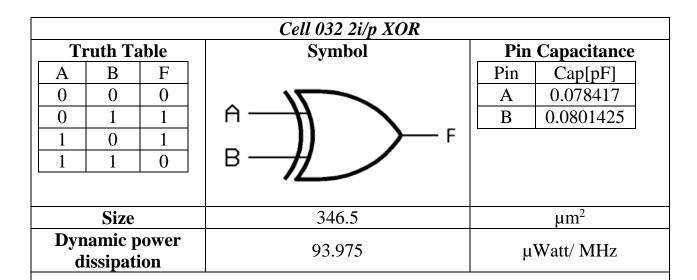
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	2.119	3.287	1.742	2.303
Delay B=>F	1.389	1.533	0.738	1.196



	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.49	1.58	1.36	1.53
Delay B=>F	1.31	1.42	1.28	1.72



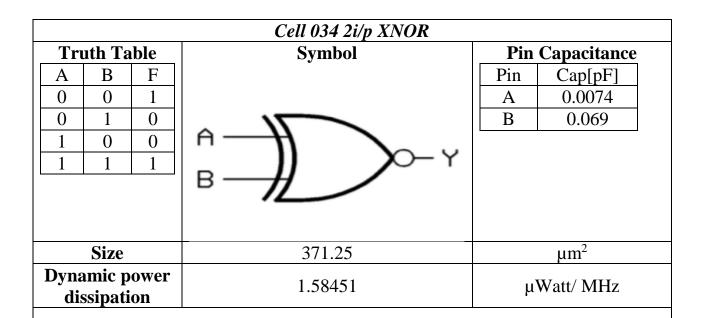
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.06	1.03	3.812	3.708
Delay B=>F	0.9	1.004	2.57	3.55



	Rise LH Transition		Fall HL T	ransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	3.2324	3.551	2.535	3.001
Delay B=>F	4.1628	4.4713	2.445	2.839

	Cell 033 2i/p XNOR							
Truth Table		ole	Symbol	Pin Capacitance				
A	В	F		Pin	Cap[pF]			
0	0	1	1	A	0.004717			
0	1	0	\(\rightarrow \limits \)	В	0.00447			
1	0 1	0 1	B—————————————————————————————————————					
Size			273		μm^2			
Dynamic power			0.82663	μWatt/ MHz				

	Rise LI	H Transition	Fall HL Transition	
Input Slope [ns]	0.05 2		0.05	2
Delay A=>F	2.136	2.37	2.161	2.418
Delay B=>F	2.12	2.33	2.132	2.47



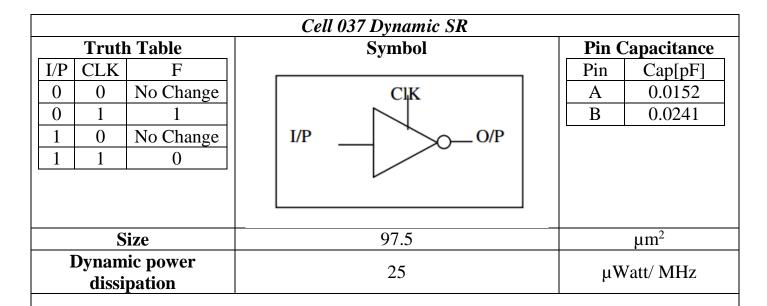
	Rise LI	H Transition	Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.1527	1.404	3.828	4.137
Delay B=>F	0.634	0.998	1.978	2.315

	Cell 035 2i/p XNOR								
Tr	Truth Table		Symbol	Pin Capacitance					
A	В	F		Pin Cap[pF]					
0	0	1		A 0.0030655					
0	1	0		В 0.00317876					
1	0	0	ΛM						
1	1 1 1		ATT \						
			B-JJ_O-out						
	Size		214.226	μm^2					
	amic po ssipatio		81.9	μWatt/ MHz					

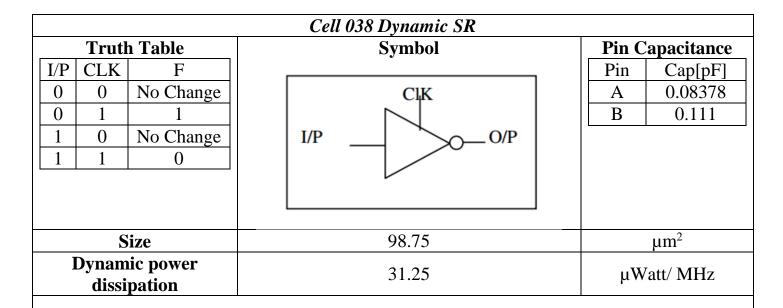
	Rise LI	H Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	0.35	0.491803	2.0563	2.46	
Delay B=>F	0.49435	0.491803	2.1312	2.377	

	Cell 036 2i/p XNOR							
Tr	Truth Table		Symbol	Pin (Capacitance			
A	В	F		Pin	Cap[pF]			
0	0	1		A	0.42*10^-3			
0	1	0		В	0.42*10^-3			
1	0	0	$\sqrt{11}$		_			
1	1 1 1		$A \longrightarrow A$					
			~ >> —out					
			В -11 /					
	Size		220		μm ²			
Dyna	amic p	ower	45		Vatt/ MHz			
di	ssipati	on	43	μν	valu ivii iz			

	Rise LH	Fransition	Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	3.115	3.442	2.623	2.951
Delay B=>F	1.485	1.830	2.469	2.951



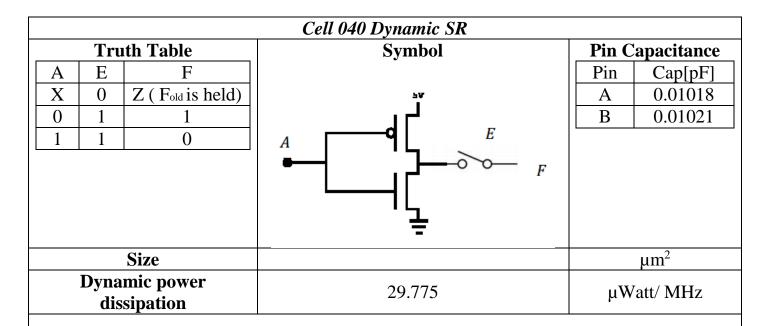
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay I/P=>F	1	0.488	0.635	0.99
Delay CLK=>F	0.326	0.901	0.001	0.2



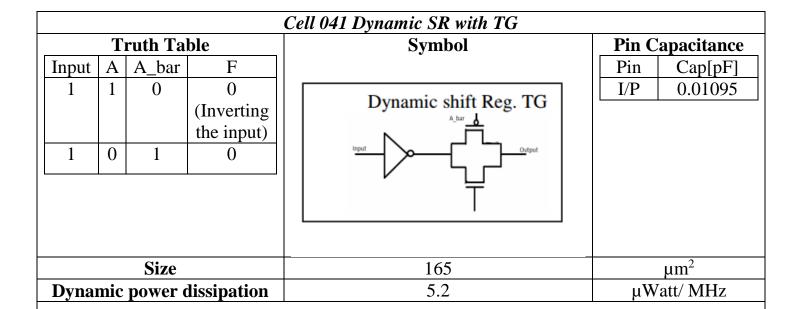
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05 2		0.05	2
Delay I/P=>F, CLK=1	1.564	0.941	0.261	0.415

Cell 039 Dynamic SR						
Truth Table		Symbol	Pin C	apacitance		
I/P CLK	F		Pin	Cap[pF]		
0 0	0		I/P	31.65		
0 1	1	U1 QK 1/2 171	Clk	5.6377		
1 0	1	\$ <u>\$</u>				
1 1	0					
Size		118.75		μ m ²		
Dynamic power dissipation		5.362	μW	att/ MHz		

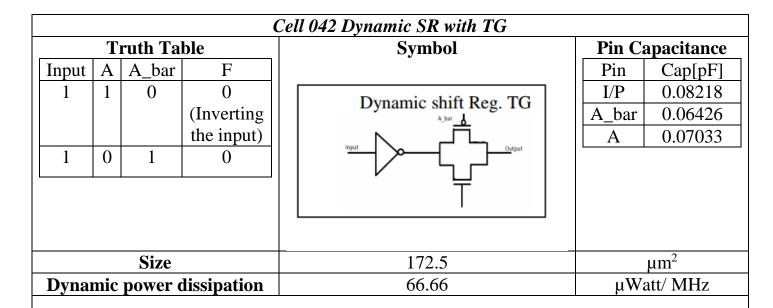
	Rise LH Transition		Fall HL Tr	ansition
Input Slope [ns]	0.05 2		0.05	2
Delay I/P=>F, CLK=1	0.721	0.413	0.6	0.651



Rise LH Transition Fall HL Transition		Rise LH Transition		Transition		
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	0.751	1.11	0.66	1		
Delay E=>F	0.84	0.673	0.062	0.16		



	Rise LH Transition		Fall HL T	ransition
Input Slope [ns]	0.05 2		0.05	2
Delay I/P=>F	1.844	2.985	0.917	0.995



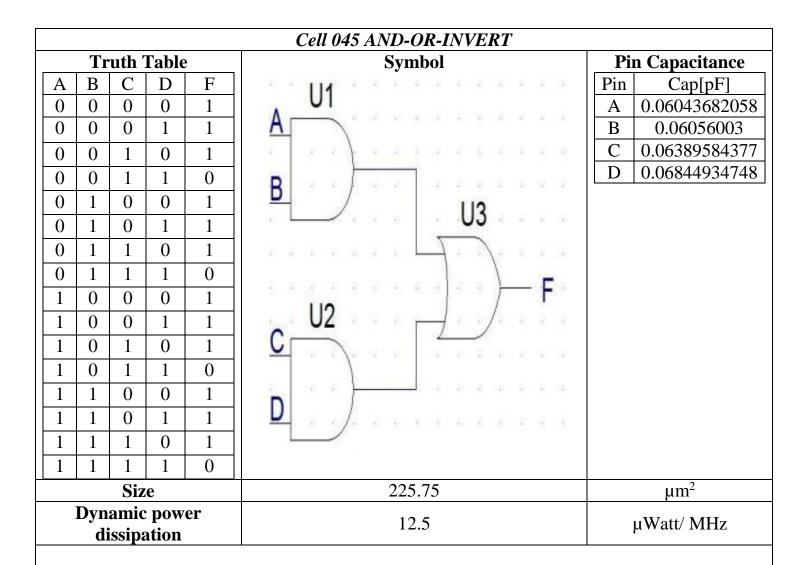
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay I/P=>F	1.065	1.522	0.451841	0.66532

Cell 043 Dynamic SR with TG						
Truth Table			Symbol	Pin Capacitance		
Input	CLK	F		Pin Cap[pF]		
X	1	X'	CIk I	Input 0.051		
X	const	0				
			Input Output			
			CIK			
	Size		157.5	μm^2		
D	Dynamic power		62.5	uWett/MIIa		
dissipation		_	62.5	μWatt/ MHz		

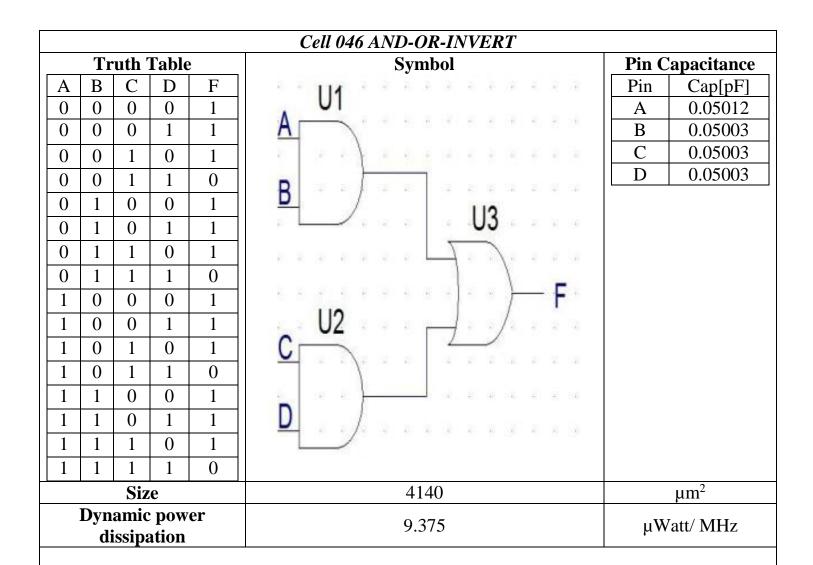
	Rise LH Transition		Fall HL Tra	ansition
Input Slope [ns]	0.05 2		0.05	2
Delay Input=>F	0.398 0.511		0.408	0.625

	Cell 044 Dynamic SR with TG						
	Truth T	'able	Symbol	Pin C	apacitance		
IN	TG	Out	TO	Pin	Cap[pF]		
0	0	Z	► TG	IN	0.008406		
1	0	Z		TG	0.012325		
0	1	1					
1	1	0					
Size)	255	μm ²			
Dynamic power dissipation			2.2456	μWatt/ MHz			

	Rise LH Transition		Fall HL Tr	ansition
Input Slope [ns]	0.05	0.05 2		2
Delay IN=>Out	0.025397	1.0018	0.075	2.998
Delay TG=>Out	0.025045	1.0018	0.075	2.998



	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.2526	0.322334	5.00399	0.250002
Delay B=>F	1.2526	0.322334	5.00399	0.250002
Delay C=>F	1.2051	1.81333	5.0742	1.79551
Delay D=>F	1.2051	1.81333	5.0742	1.79551



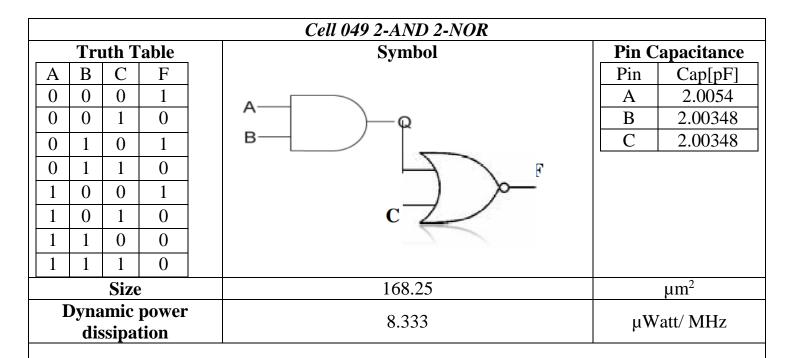
	Rise LH Transition		Fall HL	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.643	0.949	0.518	0.598
Delay B=>F	0.614	1.013	0.493	0.578
Delay C=>F	1.178	1.418	0.668	0.765
Delay D=>F	1.064	1.517	0.636	0.712

Cell 047 2x2AND-2NOR				
Truth Table	Symbol		Pin Capacitance	
$\mathbf{F} = (\mathbf{AD} + \mathbf{BC})'$		Pin	Cap[pF]	
A B C D F		A	0.05	
		В	0.049	
			0.05	
1 1 0 1 1		D	0.048	
1 1 1 1 1	_)			
Size	186.25		μm²	
Dynamic power dissipation	75	μW	att/ MHz	

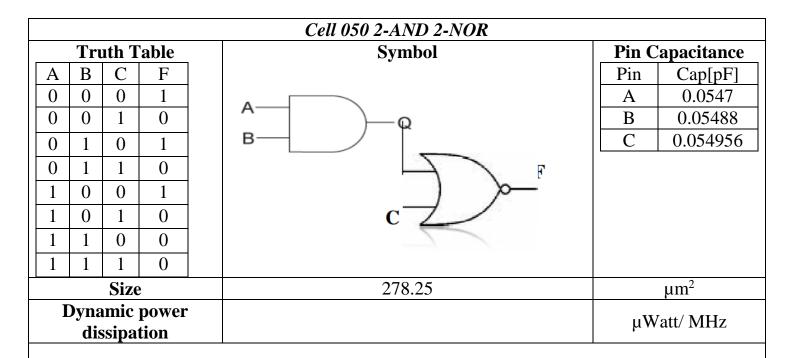
	Rise LH Transition		Fall HL T	ransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.3	1.7	0.8	0.9
Delay B=>F	2.3	2.5	1	1
Delay C=>F	2.1	2.55	1	1
Delay D=>F	1.4	1.7	0.9	1

Cell 048 2x2AND-2NOR				
Truth Table	Symbol		Pin Capacitance	
A B C D F		Pin	Cap[pF]	
		A	0.0835	
0 0 1 1 0)	В	0.0835	
1 1 0 1 1		С	0.0835	
		D	0.0835	
])—			
Size	232.5		μm²	
Dynamic power dissipation	199.75	μW	att/ MHz	

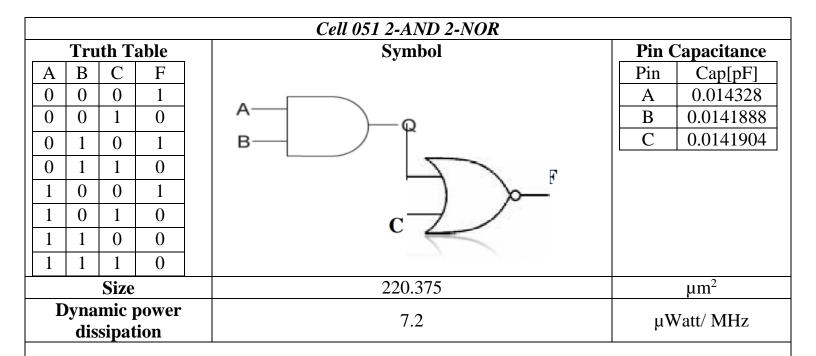
1 U				
	Rise LH Transition		Fall HL T	ransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.982314	0.00108	2.7713	3.0443
Delay B=>F	0.982314	0.00108	2.7713	3.0443
Delay C=>F	0.39267	0.687415	1.0802	1.4730
Delay D=>F	0.39267	0.687415	1.0802	1.4730



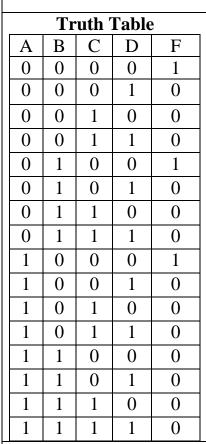
	Rise LH Transition		Fall HL Tr	ansition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	2.285	2.651	1.2496	1.6754
Delay B=>F	1.844	2.1	1.0635	1.4003
Delay C=>F	0.808	1.158	0.3804	0.6972



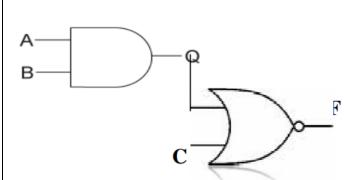
	Rise LH Transition		Fall HL Tr	ansition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.61844	0.812665	1.32	1.71
Delay B=>F	0.58	0.71096	1.357	1.792
Delay C=>F	0.341113	0.535	0.425755	0.805936



	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.729	0.875	0.9722	1.1439
Delay B=>F	0.665	0.812	0.9212	1.2473
Delay C=>F	0.471	0.63	0.359	0.6668



Cell 052 2-AND 2-NOR Symbol

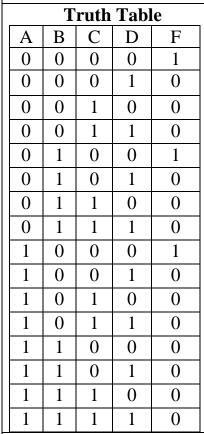


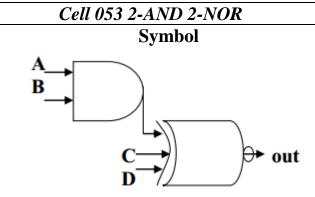
Pin Capacitance

Pin	Cap[pF]
A	0.00478
В	0.00478
С	0.004776

Size	198.75	μm^2
Dynamic power dissipation	0.13977	μWatt/ MHz

		1 . 9	•/	
	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.319	1.539	2.184	2.452
Delay B=>F	1.152	1.424	2.071	2.378
Delay C=>F	0.556	0.878	0.591	1.029
Delay C=>F	0.791	1.099	0.595	0.971
Delay C=>F	0.65	0.952	0.591	0.972

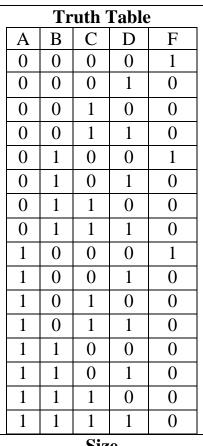


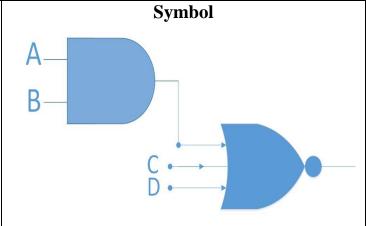


Pin Capacitance			
Pin	Cap[pF]		
A	0.002378		
В	0.0021718		
С	0.002399		
D	0.00209		

				·		
Size					242.5	μm^2
	•		c pov		0.61425	μWatt/ MHz

	_	i Topugunon Delay			
	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	2.078	2.5	5.4945	5.8333	
Delay B=>F	1.9954	2.3039	4.9546	5.2941	
Delay C=>F	0.9252	1.3632	3.5819	3.8474	
Delay D=>F	0.793	1.1941	2.9802	3.2541	



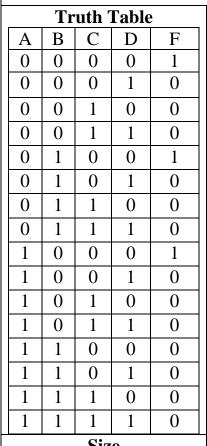


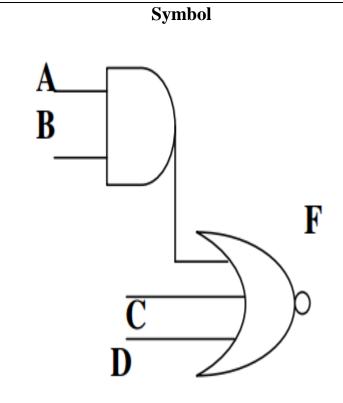
Cell 054 2-AND-3-NOR

Pin Capacitance				
Pin	Cap[pF]			
A	0.00242748			
В	0.00238202			
C	0.00226118			
D	0.00226593			

Size	216.25	μm^2
Dynamic power	0.675	μWatt/ MHz

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.5978	1.7305	1.989	2.22
Delay B=>F	1.444	1.5933	1.922	2.235
Delay C=>F	1.088	1.1966	0.76	1.096
Delay D=>F	0.939	1.1291	0.682	1.026



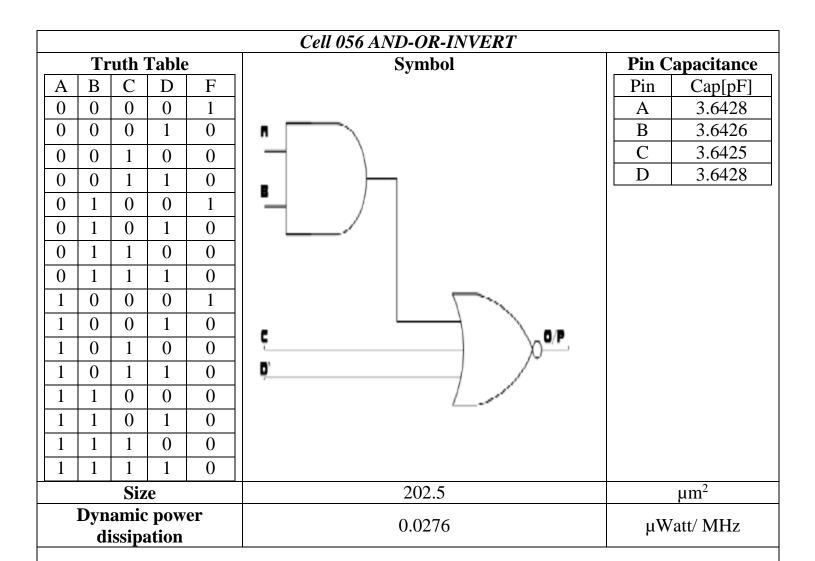


Cell 055 2-AND-3-NOR

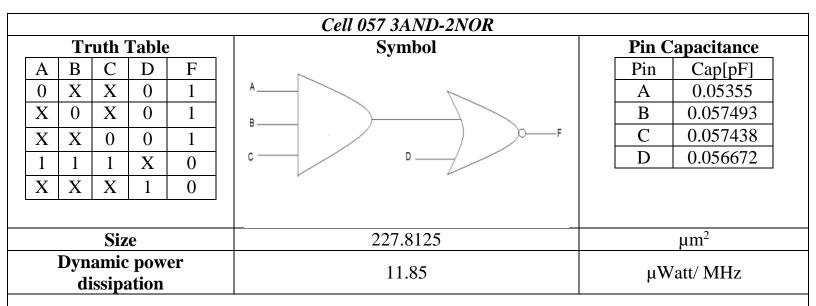
Pin Capacitance				
Pin	Cap[pF]			
A	0.0063			
В	0.00346			
С	0.0032			
D	0.006			

			_	_		
		Siz	æ		276.25	μm^2
	•		pow ation		0.11	μWatt/ MHz

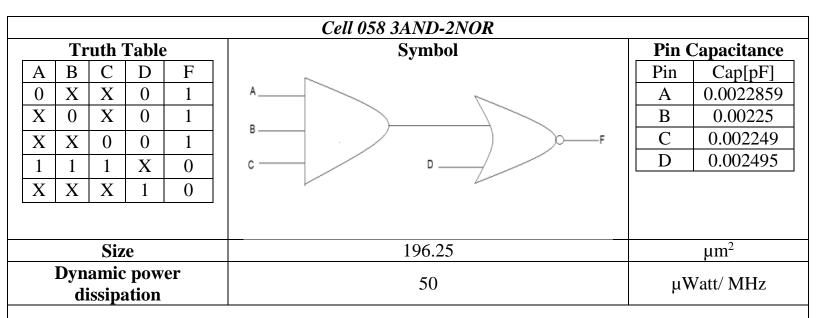
	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	1.293	1.64	1.55	1.97	
Delay B=>F	1.37	1.55	1.55	1.88	
Delay C=>F	0.5	0.8	0.4	0.5	
Delay D=>F	0.57	0.6	0.32	0.4	



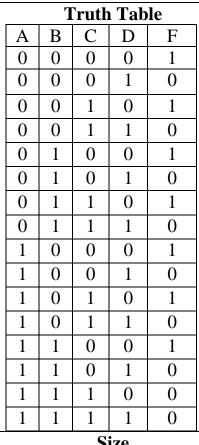
	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	2.772	2.96	1.638	2.06	
Delay B=>F	3.093	3.38	1.732	2.042	
Delay C=>F	1.886	1.957	0.638	1.09	
Delay D=>F	1.67	1.932	0.586	0.988	



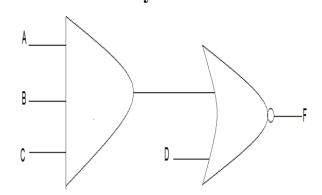
= = F i g i i = = = = = = = = = = = = = = = = = = =					
	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	2.01	2.263	2.01	2.263	
Delay B=>F	2.097	2.287	2.097	2.287	
Delay C=>F	1.93	2.074	1.93	2.074	
Delay D=>F	0.792	0.914	0.792	0.914	



	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.763364	0.961365	2.58	2.9387
Delay B=>F	0.731027	0.886016	2.46	2.752
Delay C=>F	0.637914	0.845313	2.36	2.625
Delay D=>F	0.300549	0.454607	0.495672	0.889202



Cell 059 3AND-2NOR Symbol



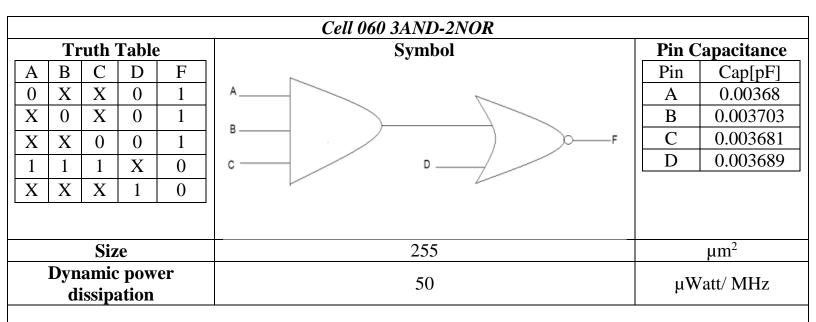
Pin Capacitance

Pin	Cap[pF]
A	0.00396
В	0.003937
C	0.0039705
D	0.0039696

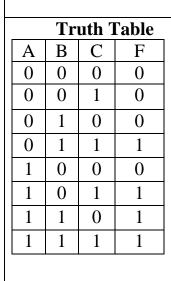
Size
Dynamic power
dissipation

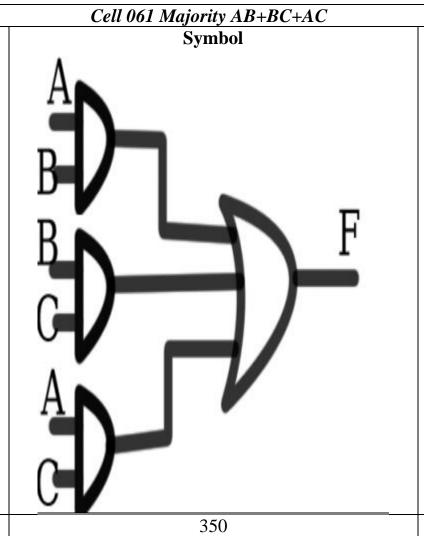
291.25 1.2256 μm² μWatt/ MHz

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.583	1.973	3.621	4.013
Delay B=>F	1.584	1.974	3.675	4.013
Delay C=>F	1.58	1.974	3.617	3.013
Delay D=>F	0.459	0.527	0.531	0.855



1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	3.6416	3.9988	2.308	2.6635	
Delay B=>F	3.9749	4.3365	2.6416	3.0032	
Delay C=>F	4.3084	4.6667	2.9749	3.333	
Delay D=>F	0.59174	0.65317	0.13083	0.16635	





Pin Capacitance			
Pin	Cap[pF]		
A	2.26		
В	2.13		
C	2.4166		

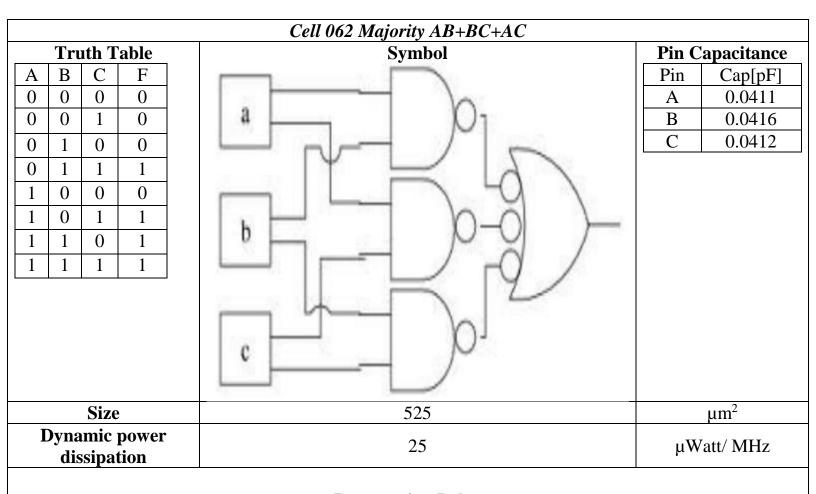
Size
Dynamic power
dissipation

1.24*10^-10

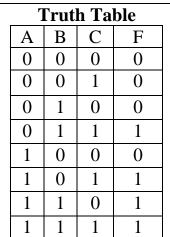
μWatt/ MHz

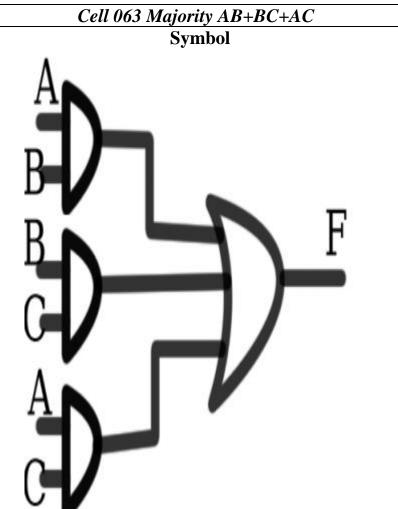
μm²

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	2.2155	2.4686	3.6677	3.9399
Delay B=>F	2.4585	2.7931	6.6375	7.2064
Delay C=>F	2.9914	3.4091	5.9655	ZERO



1					
Rise LH Transition		Fall HL Transition			
0.05	2	0.05	2		
2.2324	2.6497	2.0215	2.205		
1.72215	2.03085	1.67	1.936		
1.8893	2.2756	1.7905	2.0175		
	0.05 2.2324 1.72215	0.05 2 2.2324 2.6497 1.72215 2.03085	0.05 2 0.05 2.2324 2.6497 2.0215 1.72215 2.03085 1.67		

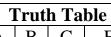




Pin Capacitance			
Pin	Cap[pF]		
Α	2.16		
В	2.13		
C	2.46		

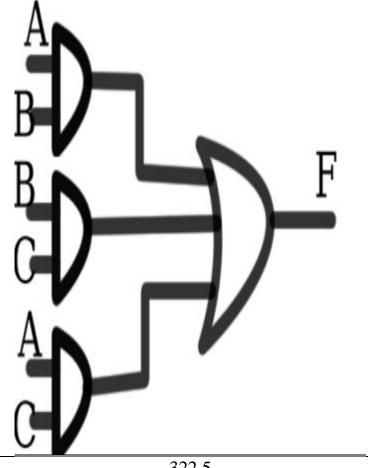
Size	320	μm^2
Dynamic power dissipation	35	μWatt/ MHz

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.58115	1.4991	1.2794	1.1754
Delay B=>F	1.13235	1.035	1.038	1.06705
Delay C=>F	1.3314	1.283	1.2265	1.1563



Α	В	C	F
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

Cell 064 Majority AB+BC+AC Symbol



Pin Capacitance

Pin	Cap[pF]
A	0.051125
В	0.053875
С	0.05437

Size Dynamic power dissipation

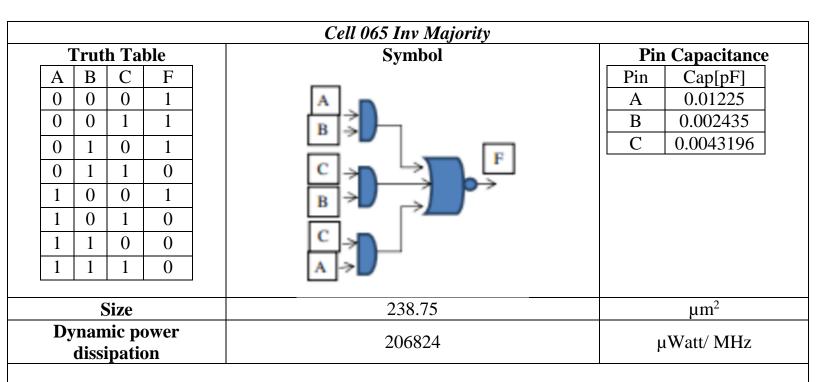
322.5

33.33

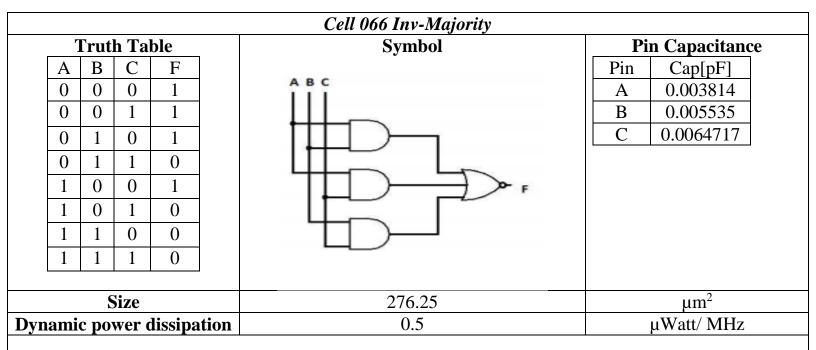
μm²

 $\mu Watt/MHz$

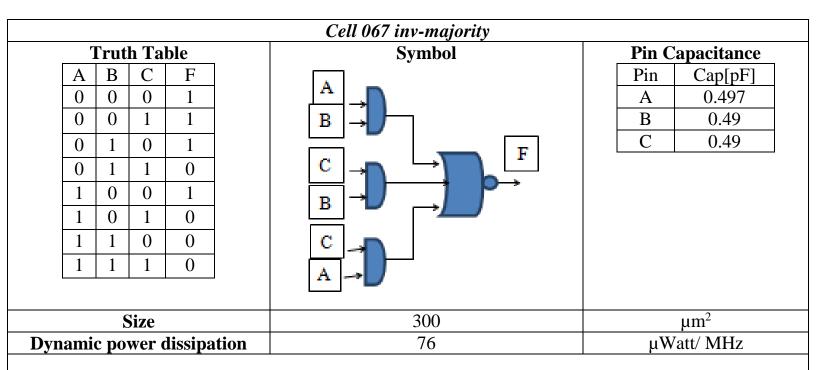
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	4.57	4.94	5.3	5.44
Delay B=>F	4.14	4.44	5.6	5.94
Delay C=>F	3.5	4.7	6.3	6.5



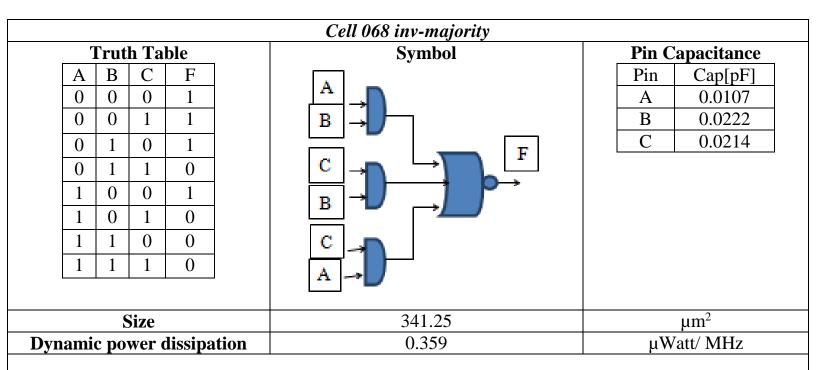
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	3	3	2	2
Delay B=>F	4	4	2	3
Delay C=>F	5	5	2	3



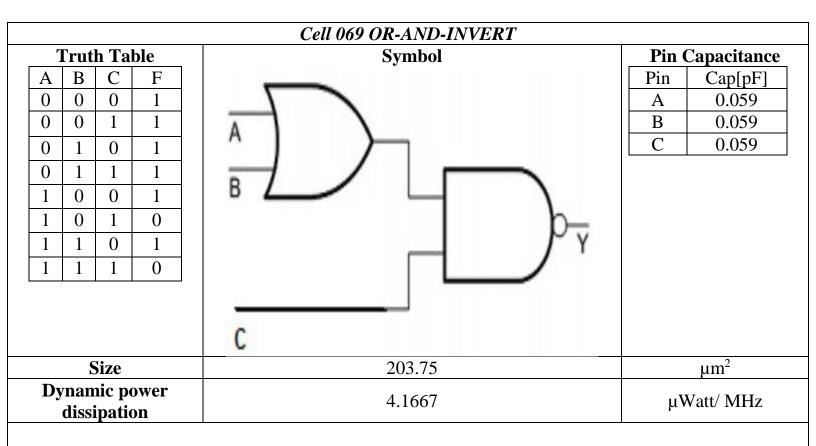
	Rise LH Transition		Fall HL Transition			
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	0.8651	1.0674	2.876	3.247		
Delay B=>F	0.9887	1.179	2.8315	3.168		
Delay C=>F	1.01	1.1124	3.0899	3.382		



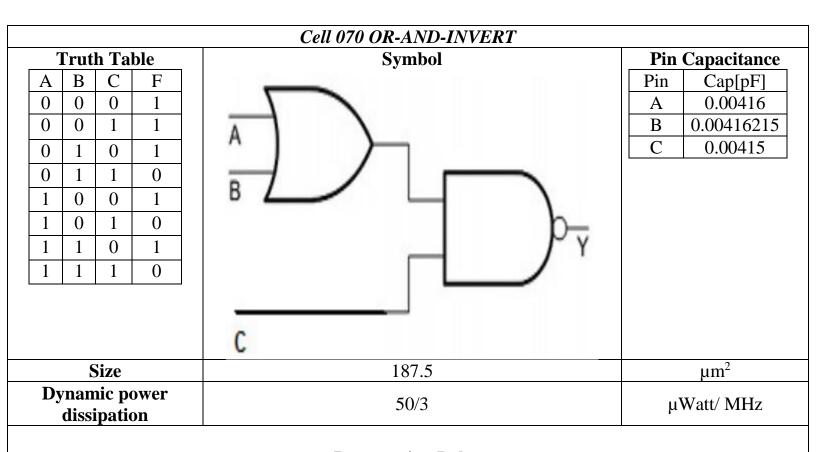
Tragar 1 m						
	Rise LH Transition		Fall HL Transition			
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	0.75	0.95	2.7	3.1		
Delay B=>F	0.5	0.75	1.75	2.1		
Delay C=>F	0.9	1	3	3.2		



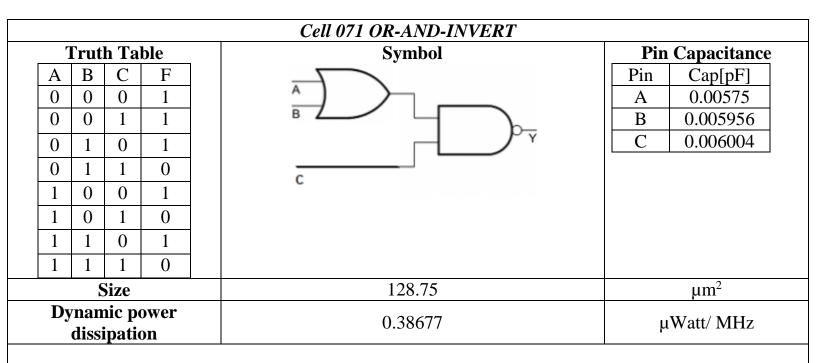
	Rise LH Transition		Fall HL Transition			
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	1.256	1.837	1.549	1.5981		
Delay B=>F	2.325	2.649	2.1751	2.6488		
Delay C=>F	1.539	2.994	2.031	1.7319		



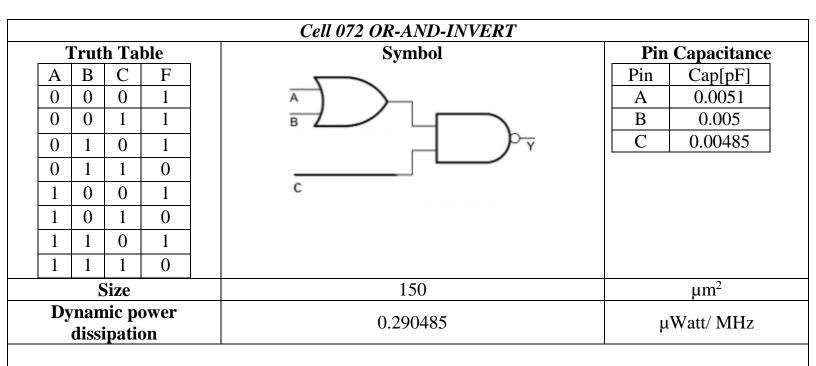
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.449	1.8009	2.712	3
Delay B=>F	1.268	1.579	2.454	2.749
Delay C=>F	0.705	1.0824	0.734	1.057



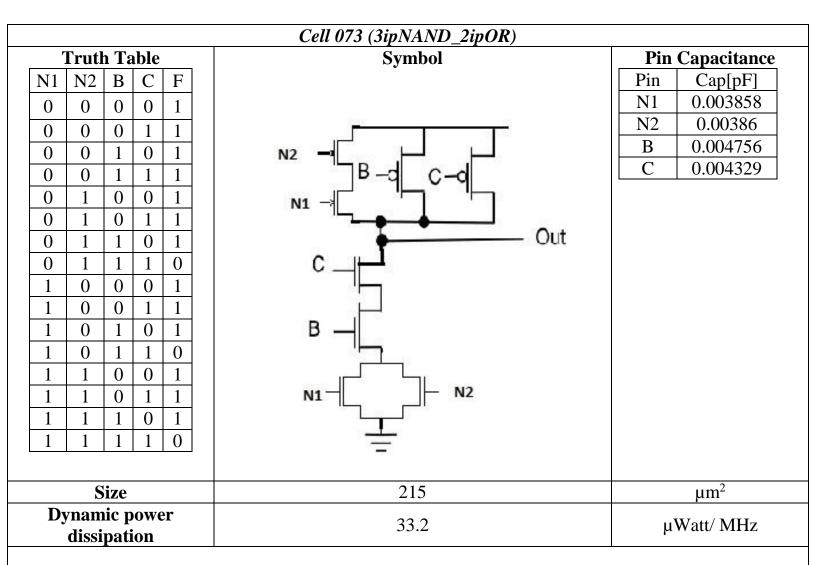
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	2.8	3.1	0.5	0.789
Delay B=>F	1.75	1.85	0.53	0.87
Delay C=>F	2.1	2.3	0.7	0.88



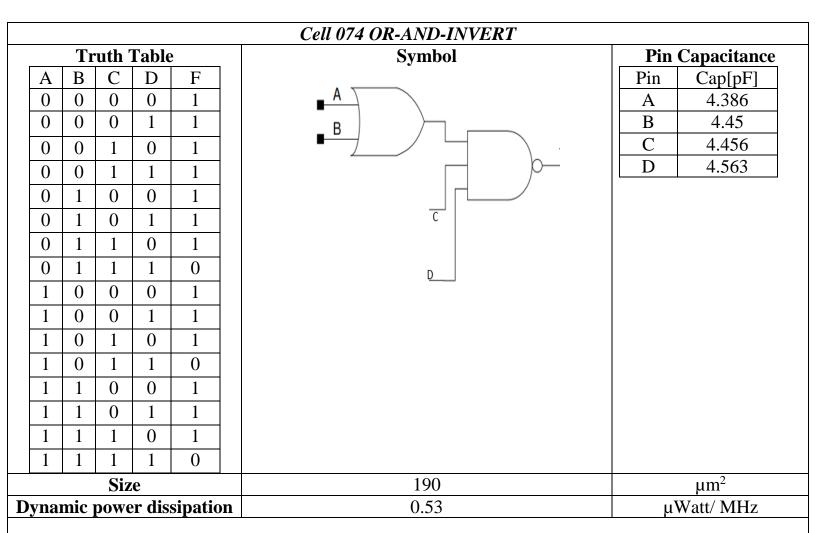
	Rise LH Transition		Fall HL Transition			
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	0.793	0.869	2.725	3.002		
Delay B=>F	0.72	0.815	2.097	2.364		
Delay C=>F	0.468	0.496	1.48	1.844		



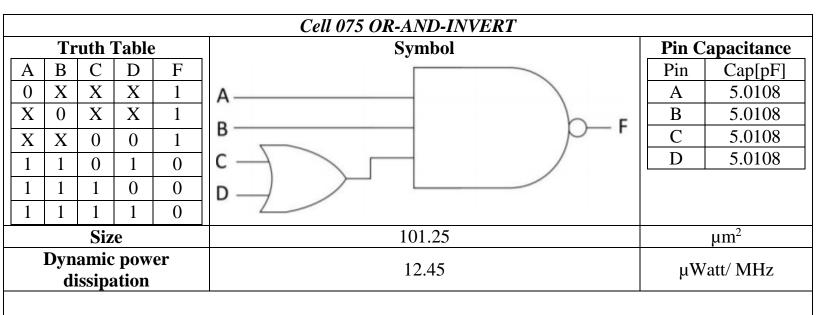
	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	2.3987	2.7014	1.947	2.3406	
Delay B=>F	2.117	2.3284	1.5922	2.0062	
Delay C=>F	0.7209	1.0604	0.9881	1.3161	



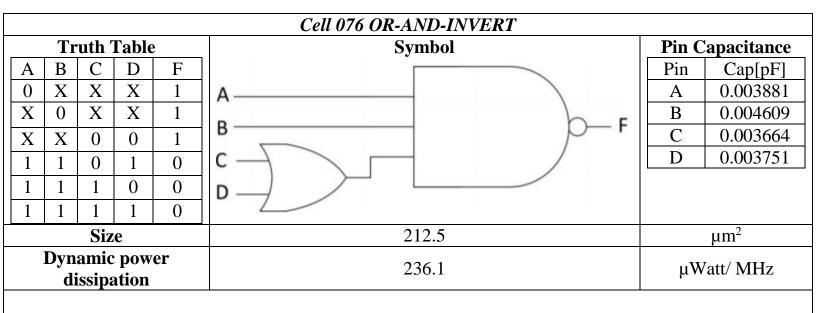
	Rise LH	Transition	Fall HL	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay N1=>F	1.29	1.623	1.612	1.885
Delay N2=>F	1.508	1.833	1.782	2.04
Delay B=>F	1.237	1.368	0.64	1
Delay C=>F	0.944	1.21	0.475	0.845



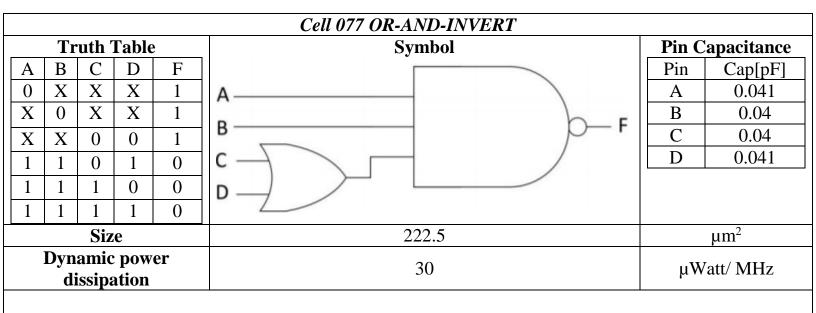
	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	0.837	1.0023	2.35	2.499	
Delay B=>F	Delay B=>F 0.837 Delay C=>F 0.3		2.35	2.499	
Delay C=>F			1.7	2.0667	
Delay D=>F	0.194	0.336	1.48	1.74	



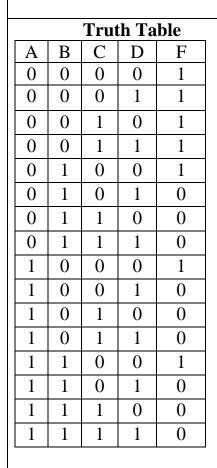
	Rise LH	Transition	Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	2.1498	2.295	2.1812	2.5234
Delay B=>F	1.897 2.1413 0.763 1.012 0.596 0.944		1.8194	2.1933
Delay C=>F			1.549	1.912
Delay D=>F			1.328	1.628



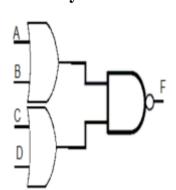
- 1 · · g · · · · · · J							
	Rise LH	Transition	Fall HL Transition				
Input Slope [ns]	0.05	2	0.05	2			
Delay A=>F	0.835	1.165	2.0895	2.3			
Delay B=>F	0.756	1.1371	1.9375	2.2004			
Delay C=>F	2.3435	2.5334	1.549	3.3701			
Delay D=>F	2.4218	2.5038	1.328	3.0742			



· · · · · · · · · · · · · · · · · ·							
	Rise LH	Transition	Fall HL Transition				
Input Slope [ns]	0.05	2	0.05	2			
Delay A=>F	6.009	5.935	2.127	2.362			
Delay B=>F	6.217	5.899	1.852	2.199			
Delay C=>F	4.548	4.704	1.730	1.876			
Delay D=>F	4.616	4.582	2.031	2.259			



Cell 078 OR-AND-INVERT Symbol

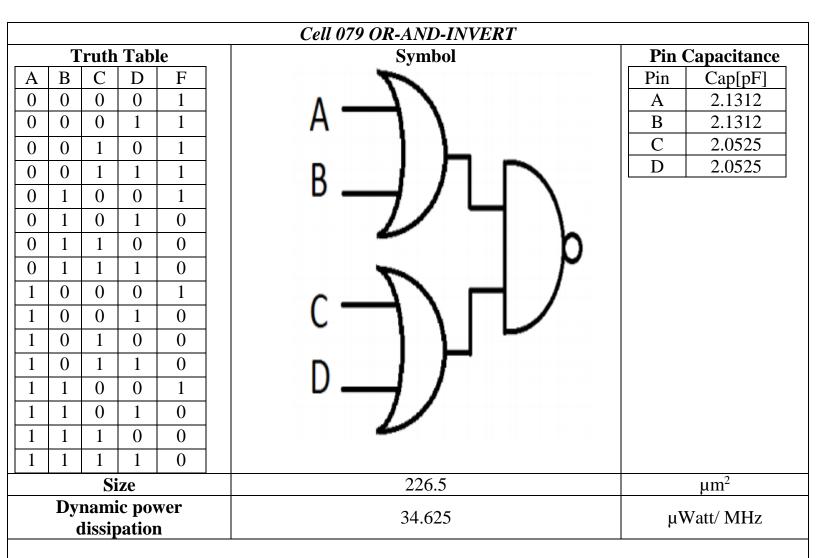


Pin Capacitance

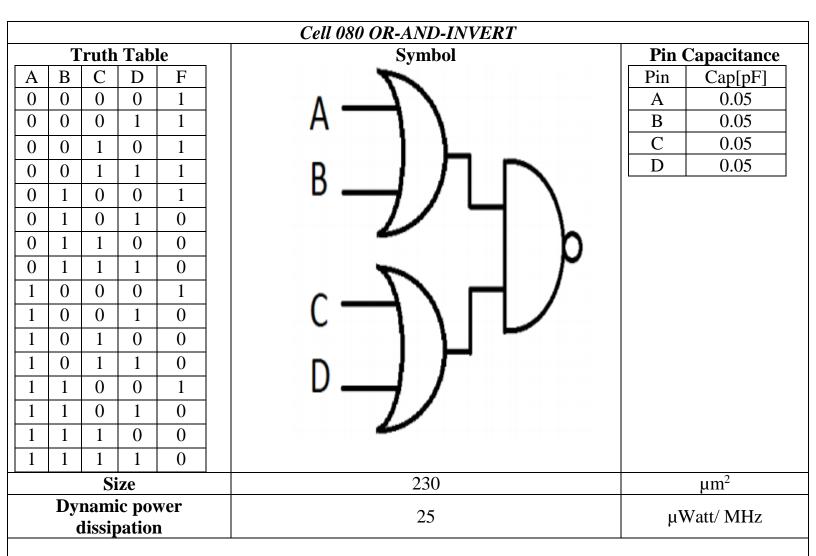
Pin	Cap[pF]
A	0.006526
В	0.005377
С	0.005383
D	0.006036

Size230μm²Dynamic power dissipation0.66μWatt/ MHz

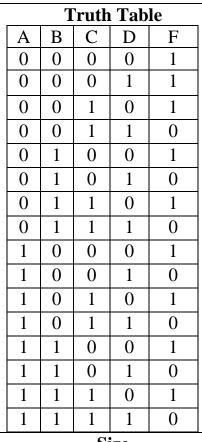
- I						
	Rise LH	Transition	Fall HL Transition			
Input Slope [ns]	0.05	2	0.05	2		
Delay A=>F	0.679775	0.859551	0.601124	0.792135		
Delay B=>F	0.634832	0.932584	0.337079	0.561798		
Delay C=>F	0.398876	0.657303	0.308989	0.589888		
Delay D=>F	0.438202	0.573834	0.370787	0.685393		



	Rise LH	Transition	Fall HL	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	elay A=>F 0.526	0.787	0.853	1.262
Delay B=>F	0.5388	0.76403	0.675	1.228
Delay C=>F	0.8704	0.9337	1.107	1.262
Delay D=>F	0.7847	0.9887	0.771	1.212



	Rise LH	Transition	Fall HL	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.13	0.2	0.7	1.13
Delay B=>F	0.13	0.2	0.7	1.13
Delay C=>F	0.13	0.2	0.7	1.13
Delay D=>F	0.13	0.2	0.7	1.13



A B C F

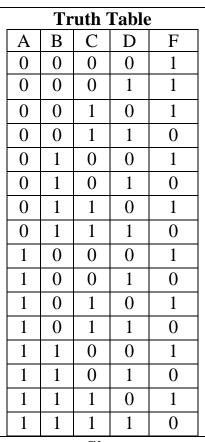
Cell 081 OR-AND-INVERT

Symbol

Pin Capacitance				
Pin	Cap[pF]			
A	0.0525			
В	0.0525			
С	0.0525			
D	0.0525			

_	_	_	Ů		
	S	ize		278.75	μm^2
•		ic po pation		15.625	μWatt/ MHz

	Rise LH	Transition	Fall HL	Transition	
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	ay A=>F 4.574	4.794	2.38	2.685	
Delay B=>F	4.924	5.228	2.431	2.803	
Delay C=>F	5.294	5.603	2.488	2.936	
Delay D=>F	0.582	0.876	0.647	0.849	



A B C F

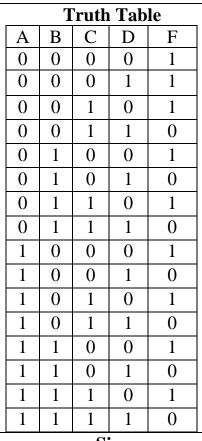
Cell 082 OR-AND-INVERT

Symbol

Pin Capacitance			
Pin	Cap[pF]		
A	0.0051668		
В	0.0074818		
C	0.0065335		
D	0.006754		

Size	157.5	μm^2
Dynamic power dissipation	1383100	μWatt/ MHz

	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.7	1	0.7	1
Delay B=>F	1	1	1	1
Delay C=>F	1	1	1.1	1
Delay D=>F	0.2	1	1	1



A B C F

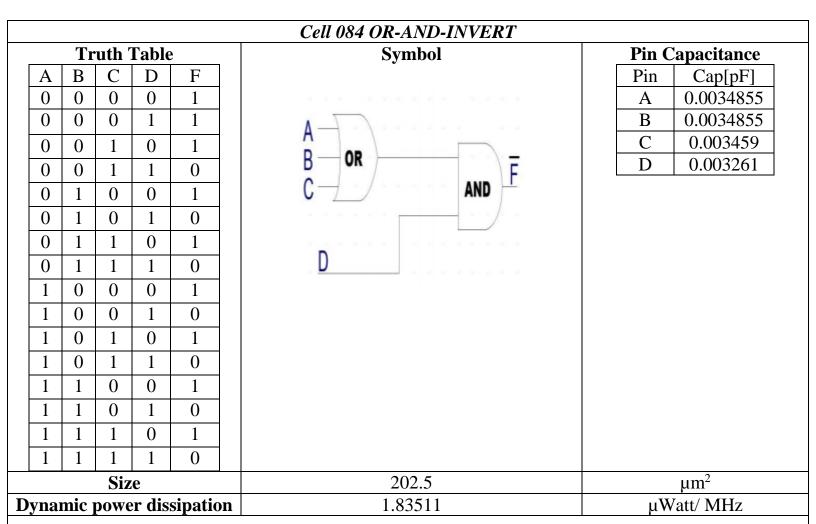
Cell 083 OR-AND-INVERT

Symbol

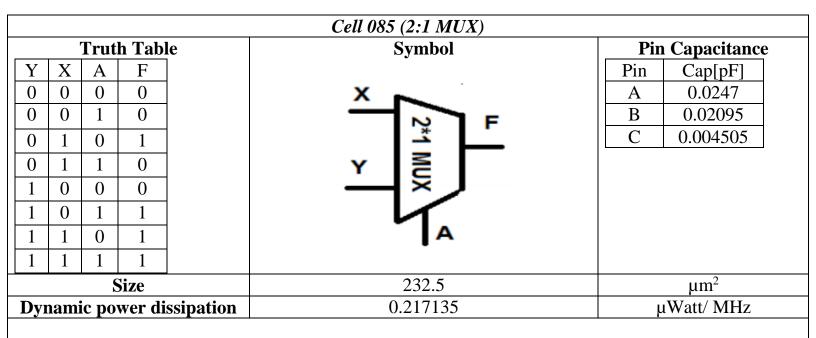
Pin Capacitance			
Pin	Cap[pF]		
A	0.0669		
В	0.06457		
С	0.04949		
D	0.01193		

Size	630	μm^2
Dynamic power dissipation	6.25	μWatt/ MHz

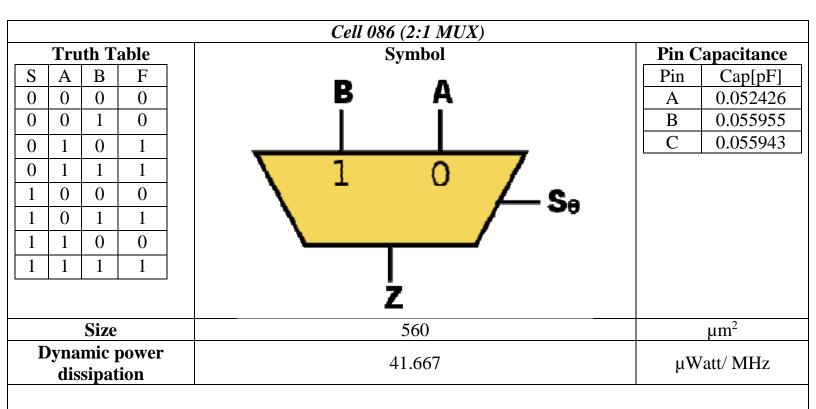
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.8489	0.9523	0.886	0.997
Delay B=>F	0.7773	0.9255	0.779	0.921
Delay C=>F	0.5933	0.7632	1.095	1.301
Delay D=>F	0.2179	0.251	0.527	0.776



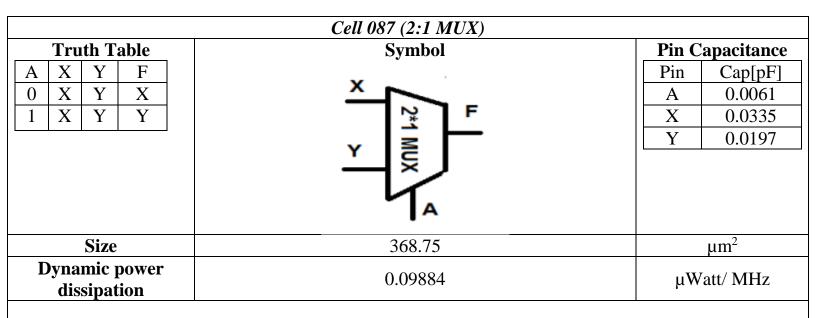
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	3.892	4.15	1.98244	2.402
Delay B=>F	4.089	4.346	2.1075	2.4566
Delay C=>F	4.417	4.726	2.405	2.809
Delay D=>F	0.83	1.168	1.9743	2.3499



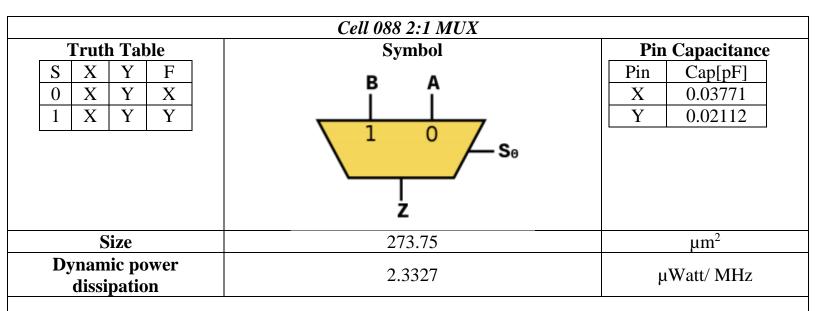
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay S=>F	0.528	0.78	0.425	0.615
Delay A=>F	0.528	0.727	0.425	0.694
Delay B=>F	0.767	1.168	0.528	0.885



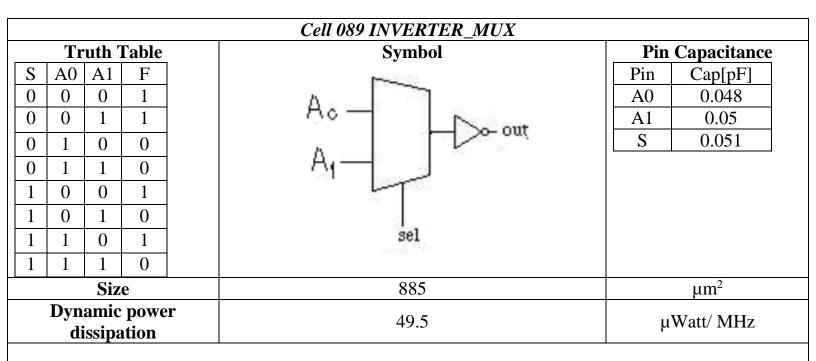
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay S=>F	0.21	0.25	0.3976	0.7283
Delay A=>F	0.1736	0.2179	0.177	0.235
Delay B=>F	0.1734	0.2211	0.169	0.204



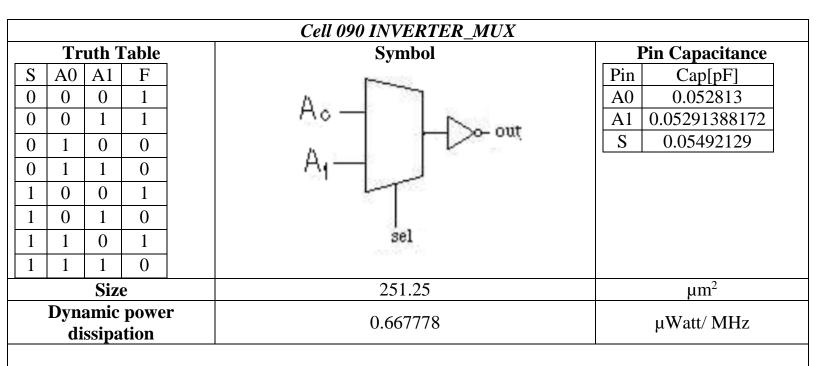
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.695	1.148	0.381	0.742
Delay X=>F	0.204	0.399	0.298	0.349
Delay Y=>F	0.216	0.409	0.279	0.344



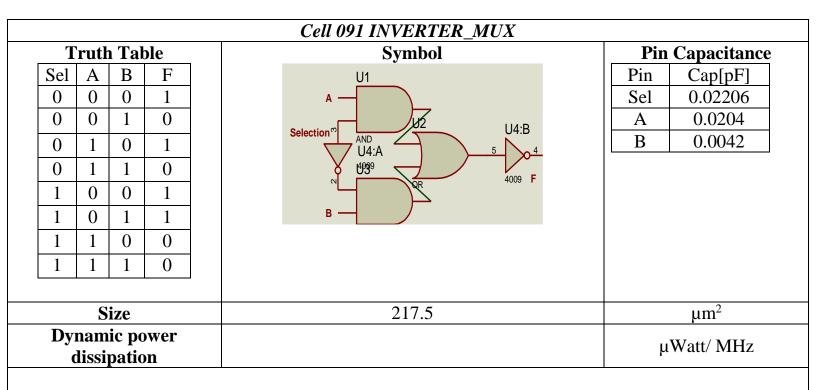
· I · · · · · · · · · · · · · · · ·					
	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay X=>F	0.2	0.61	0.2	1.008	
Delay Y=>F	0.1	0.61	0.2	1.008	



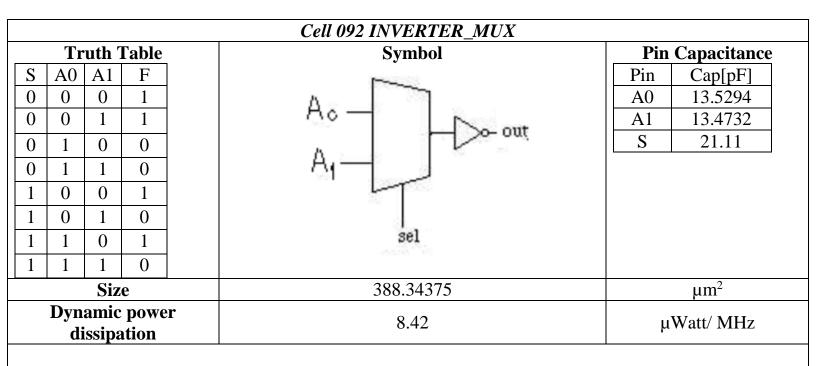
	Rise LH Transition		Transition Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay S=>F	0.15	0.3	0.45	0.725
Delay A=>F	0.4	0.52	1.2	1.56
Delay B=>F	0.455	0.65	1.2	1.42



	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A0=>F	0.423	0.652	1.1953	1.53	
Delay A1=>F	0.713	0.923	2.2801	2.6154	
Delay S=>F	0.968	1.182	2.3131	2.5943	



	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay Sel=>F	0.697	1.131	0.335	0.326	
Delay A=>F	0.366	0.457	0.345	0.572	
Delay B=>F	0.356	0.485	0.326	0.563	



	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A0=>F	0.999	1.31	1.2481	1.5702	
Delay A1=>F	2.357	2.681	2.1692	2.4969	
Delay S=>F	1.7012	2.0441	1.849	2.156	

	Cell 093 Equality Comparator							
Tru	th Ta	ble	Symbol	Pin (Capacitance			
A	В	F	97 (0.000)	Pin	Cap[pF]			
0	0	1	Input _A —\\\	A	2			
0	1	0	> Output	В	2			
1	0	0	Input _e Output					
1	1	1	Impute /					
	Size		230 μm ²		μm ²			
Dynamic		ic						
power		•	0.55	μWatt/ MHz				
dis	sipati	on						

	Rise LH 7	Γransition	Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.5	1.77	1.15	1.47
Delay B=>F	1.34	1.58	1.28	1.41

	Cell 094 Equality Comparator							
Tru	th Ta	able	Symbol		Capacitance			
A	В	F	90	Pin	Cap[pF]			
0	0	1	Input _A —\\	A	0.00806			
0	1	0	> Output	В	0.0078125			
1	0	0	Input _e Output	A`	0.00782			
1 1 1		1	Impute /	B`	0.0076			
	Size		740	μm ²				
,	ynam oowe		0.797	μWatt/ MHz				
dis	dissipation							

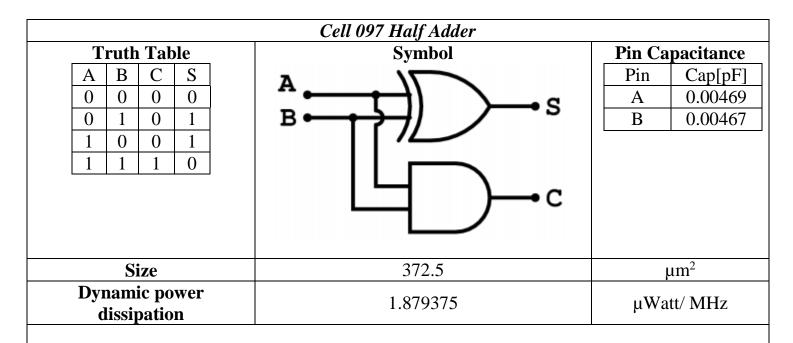
	Rise LH 7	Γransition	Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1.09	1.06	3.91	4.2
Delay B=>F	0.81	1.91	2.67	3.9

	Cell 096 Equality Comparator							
Tri	uth Ta	ble	Symbol	Pin	Capacitance			
A	В	F		Pin	Cap[pF]			
0	0	1		A	0.0070314			
0	1	0		В	0.006055			
1	0	0	$A \longrightarrow H$		_			
1	1	1	1 _)) > >-Y					
			$B \longrightarrow$					
	Size 277.5 μ		μ m ²					
Dyna	Dynamic power		0.721		Wett/MUz			
dis	dissipation		0.721	μWatt/ MHz				

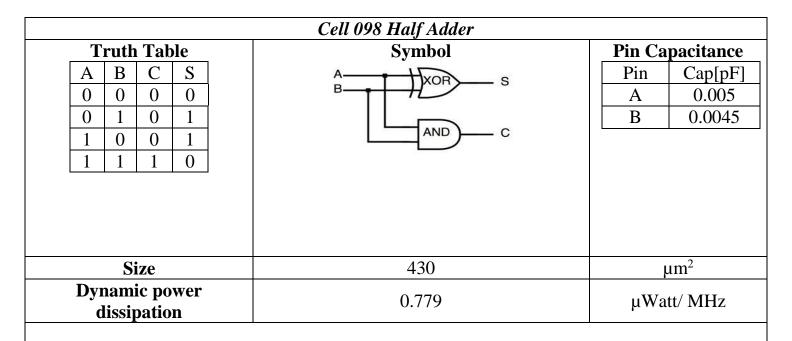
	Rise LH	Γransition	Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	0.5416	1.0192	1.1486	1.5896
Delay B=>F	0.6157	1.0584	1.4039	1.3

Cell 096 Equality Comparator							
Tru	ıth Ta	ble	Symbol	Pin	Capacitance		
A	В	F		Pin	Cap[pF]		
0	0	1		A	0.00662		
0	1	0	. 1	В	0.00662		
1	1 0 0 0						
1	1	1	5 II XX-Y				
			$B \longrightarrow$				
	Size 316.25			μ m ²			
Dynamic power		ower	0.368		Watt/MHz		
dis	ssipatio	on	0.308	μWatt/ MHz			

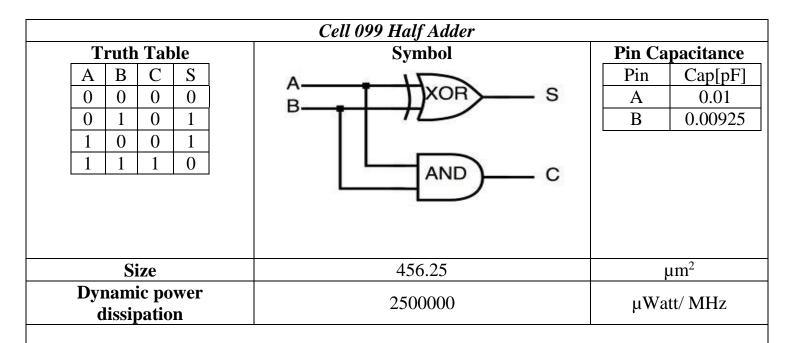
	Rise LH 7	Γransition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>F	0.786	1.075	0.869	1.141	
Delay B=>F	1.4899	1.6529	1.431	1.545	



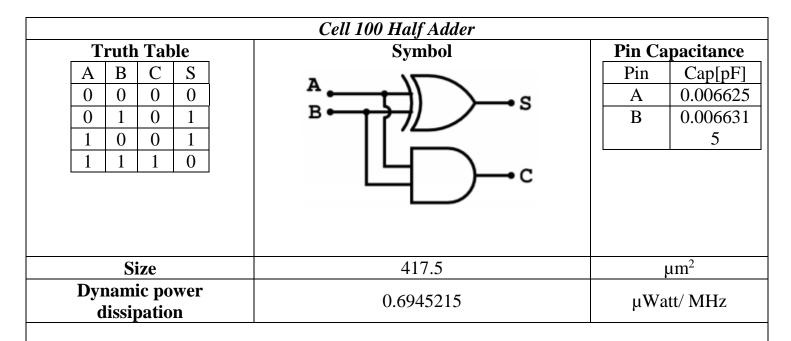
	Rise LH	Transition	Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay A=>S	7.252	7.147	5.385	5.527	
Delay A=>C	2.013	1.777	1.385	1.675	
Delay B=>S	6.17	6.76	4.575	4.76	
Delay B=>C	1.55	1.67	1.473	1.68	



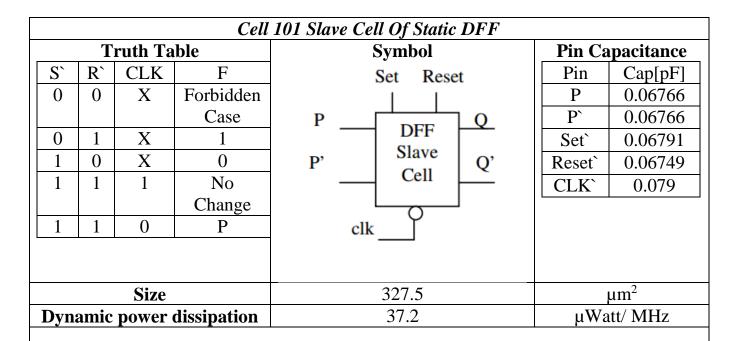
	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>S	2.7	3	3.8	4
Delay A=>C	4	4.5	2.2	2.5
Delay B=>S	2.6	2.98	3.9	3.9
Delay B=>C	3.7	3.98	2.1	2.2



	Rise LH Transition		Fall HL 7	Γransition
Input Slope [ns]	0.05	2	0.05	2
Delay A=>F	1	1.2	1.5	1.3
Delay B=>F`	0.8	0.8	0.7	1.2



	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05	2	0.05	2
Delay A=>S	2.664	3.536	3.697	4.9
Delay A=>C	2.575	3.97	1.586	2.563
Delay B=>S	2.979	3.288	3.566	4.041
Delay B=>C	2.73	3.223	2.457	2.841

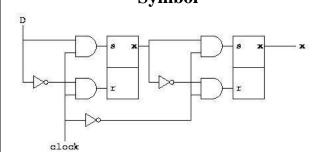


	Rise LH Transition		Fall HL Transition	
Input Slope [ns]	0.05 2		0.05	2
Delay S=>F	0.285	0.406		
Delay R=>F`			0.259	0.466
Delay P=>F	0.65	2.81	2.6588	2.76

Truth Table

		<u> </u>		
D	Set	RST	Fi	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

Cell 102 Master of static D FF Symbol

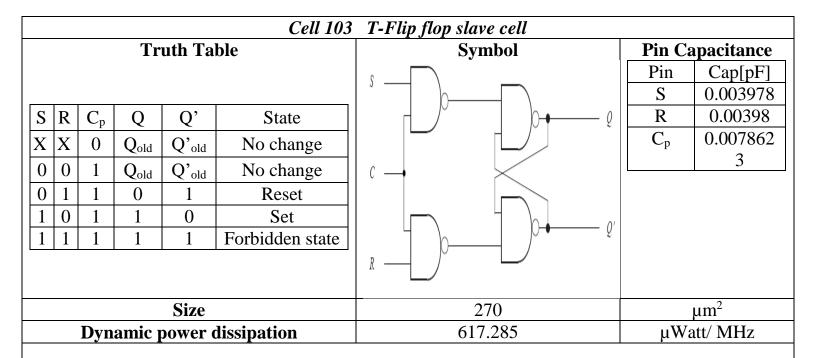


Pin Capacitance

Pin	Cap[pF]
D	0.0018
Set	0.0022
RST	0.0022
Fi	0.003125

Size	412.5	$\mu \mathrm{m}^2$
Dynamic power dissipation	20	uWatt/ MHz

	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay D=>F	0.95	1.2	0.35	0.8
Delay RST=>F`	1.15	1.2	0.65	1
Delay Set=>F	0.4	0.65	0.2	0.4



	Rise LH Transition		Fall HL Transition		
Input Slope [ns]	0.05	2	0.05	2	
Delay S=>Q	1.4	3.023	2.798	1.6583	
Delay R=>Q	2.798	3.023	1.4	1.6583	
Delay C _p =>Q	1.4	1.71	2	2.933	

	Cell 104 T FF Master							
Truth Table				Symbol	Pin Capacitance			
T	Qs	Qs_bar	F		Pin	Cap[pF]		
0	0	1	0		T	0.011		
0	1	0	1					
1	0	1	1	T				
1	1	0	0	Q Q				
	SL (se	et)&RL (res	et)	clk————				
	both are active low							
Size				573	μm ²			
Dyı	namic	power dissi	pation	67.421 μWatt/ MH		tt/ MHz		

	Rise LH Transition		Fall HL 7	Transition
Input Slope [ns]	0.05	2	0.05	2
Delay T=>F	5.105	5.24	7.685	7.84
Delay T=>F`	4.385	4.55	7.76	7.932